CURRICULUM VITAE

MAHDI AHMADI

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EDUCATION

M.S. Business Analytics **(2020-2021)**
University of North Texas

M.S. in Mechanical and Energy Engineering **(2014-2016)**
University of North Texas

- Minor in Computer Science
- Thesis: Ozone pollution of shale gas activities

Ph.D. in Environmental Philosophy **(2011-2015)**
University of North Texas

- Dissertation: Interaction of scientific expertise and democratic decision making in the case of fracking

M.S. in Philosophy of Science **(2008-2010)**
Amirkabir University of Technology, Tehran, Iran

- Thesis: Science-technology relationship

B.Sc. in Mechanical Engineering **(2000-2005)**
Amirkabir University of Technology, Tehran, Iran

TEACHING

Visiting Assistant Professor **(2025-present)**
University at Albany,Albany, NY
Department of Information Science and Technology

- **Courses Taught:**
  - Introdocution to Data and Databased (INF 202)
  - Digitial Project Management (INF 305)
  - Information in the 21st Century (INF 100)

Clinical Assistant Professor **(2022-2025)**
University of North Texas, G. Brint Ryan College of Business, Denton, TX
Department of Information Technology and Decision Sciences

- **Courses Taught:**
  - Enterprise Applications of Business Intelligence/Analytics (DSCI 4330)
  - Introduction to Data Mining (DSCI 4520)

  - Business Statistics with Spreadsheet (DSCI 3710)
- **Responsibilities & Achievements:**
  - Redesigned syllabi for DSCI 4330 and DSCI 4520 to integrate practical applications of data analytics and business intelligence with theoretical frameworks.
  - Designed and delivered engaging lectures that bridge theory with real-world applications, enhancing student comprehension and engagement.
  - Implemented project-based learning, allowing students to work on real-world business problems, leading to improved student outcomes.
  - Provided hands-on training with tools such as Excel, Tableau, R, Python, Power BI, SAS Viya, MySQL, XLMiner, and RapidMiner
  - Defined, supervised, mentored, and evaluated data analytics team projects
  - Manged classes with up to 100 students, achiving an average teaching evaluation score of 4.6/5.0
  - Desinged a library guide webpage for data mining problems and data sets: https://guides.library.unt.edu/c.php?g=1307049&p=9606552

Lab Tutor and Teaching Assistant **(2020-21)**

University of North Texas, G. Brint Ryan College of Business, Denton, TX
Department of Information Technology and Decision Sciences

- Tutored students in the following courses: *Professional Development II - Critical Thinking and Decision Making in Business*, *Basic Information Systems and Computers in Business*, *Data Analysis with Spreadsheets*, *Business Statistics with Spreadsheets*, and *Business Decision Process*.
- Prepared lecture notes, graded exams, and advised students for the final term paper in the *Information Technology Security* course (BCIS 5630).

Teaching Assistant **(2013-2014)**

University of North Texas, College of Engineering, Denton, TX
Department of Mechanical and Energy Engineering

- Assisted in teaching the Air Pollution Engineering course (Graduate level).
- Conducted multiple recitation sessions and delivered several full-length lecture.
- Graded exams, quizzes, and homework assignments, advised students on their term projects.

Teaching Fellow **(2011-15)**

University of North Texas, College of Liberal Art and Social Sciences, Denton, TX
Department of Philosophy

- Designed and taught various undergraduate courses, including *Contemporary Moral Issues*, *Philosophy of Self*, and *Introduction to Philosophy*.
- Provided a meaningful experience for students by connecting philosophical concepts to real-life situations through instructor-led discussions, group presentations, video clips, film critiques, and term papers on relevant issues.
- Prepared and delivered three lectures per week, utilizing multimedia technologies.

PROFESSIONAL EXPERIENCES

Senior Energy and Environmental Data Scientist **(2016-presnet)**

NESCAUM, Boston, MA

- Utiliz advanced data analytics tools (R, Python, Excel, VBA, QGIS, Tableau, MySQL, OriginPro) to support environmental and energy policy decision-making.
- Conduct data engineering, statistical analysis, machine larning, and time series forecasting for projects involving air quality, lab testing, fossile fuel quality, satellite data, electric vehicles, and emission reductions.
- Contribute to the development of national test procedures and emission inventories for wood-burning appliances through data analytics and visualization.
- Authored scientific reports and peer-reviewed papers, providing data-driven insights to inform state and regional environmental and energy policies.
- Particiapte in air quality and energy optimization research projects funded by regional, state, and federal agencies, applying data science and informatics techniques
- Perform air dispersion modeling and cost-benefit analyses of alternative energy and emission reduction scenarios
- Build and manage a database of national electric vehicle market and advertisement data.
- Manage multi-state, multi-agency data system for an ozone pollution project and automate data archiving and retrieval.
- Coordinate two multi-state committees
- Design and implemented a semi-automated review and evaluation process for multiple state and regional certification project

Clinical Assistant Professor **(2022-2025)**

University of North Texas, G. Brint Ryan College of Business, Denton, TX

Department of Information Technology and Decision Sciences

- Professional faculty with responsibilities distributed as 10% research, 30% service, and 60% teaching.
- Teach three undergraduate business analytics courses per semester.
- Supervise and coordinate over 100 Business Analytics students during their internships.
- Supervise an R&D project focused on developing a Retrieval-Augmented Generation AI platform with a local LLM for a financial company.
- Plan and execut several academy-industry events and case competition hackathons each year.
- Served as the Program Coordinator for the BS Business Analytics program
- Served on multiple academic committees and advisor the Business Analytics Student Club.
- Conduct research on the impact of Generative AI on the job market and the demand for AI-related skills education in higher education.
- Preform research on the application of data analytics, machine learning, and generative AI in science and technology research, higher education, and business decision making.

Data Scientist **(2021-2023)**

University of North Texas, Data Analytics and Insititutional Research

- Built predictive models for student retention, enrollment, and graduation to improve institutional strategic metrics.

- Designed new analytical dashboards to support and optimize institutional, college, and departmental decision-making processes, reducing ad hoc data report requests.
- Participated in the improvement of the existing student data warehouse and OLAP cubes.
- Performed descriptive analytics to support enterprise strategic and operational decision-making.
- Prepared analytical data models, business intelligence dashboards, and ad hoc analytics and visualizations using SAS, R, Python, and SQL.
- Automated data pipelines for high-usage analytical dashboards in SAS.

Research Assistant **(2013-2016)**

University of North Texas, College of Engineering

Energy Management Office and Department of Mechanical and Energy Engineering

- Performed photochemical modeling, source apportionment, and sensitivity analysis using CAMx to evaluate the contribution of oil and gas activities to North Texas ozone pollution.
- Conducted statistical and time series analysis on air pollution measurement data in Texas to assess short- and long-term trends of ozone.
- Simulated energy management in campus buildings using eQUEST.
- Calculated energy savings resulting from mechanical, electrical, and plumbing renovations, and authored three engineering reports on energy savings in campus buildings.

Manager of Computer-Aided Engineering Department **(2018-2011)**

Irankhodro Powertrain Co., Tehran, Iran

- Planned, managed, and implemented computer-aided engineering procedures and protocols for multiple R&D projects.
- Created a new quality control, data management, archiving, and reporting system for engineering activities.
- Supervised a team of 25 mechanical engineers in automotive engine simulation tasks.
- Managed the development of in-house cam and crankshaft dynamic and structural analysis software.
- Initiated the integration of machine learning algorithms into automotive design processes.
- Performed long-term energy and air pollution analysis in road transportation and conducted research on the future of automotive engine technologies in Iran.
- Supervised five Ph.D. students in a joint automotive engineering program with Sharif University of Technology.
- Managed research on emerging issues in the natural gas infrastructure in Iran.
- Conducted concept research on new generations of natural gas engines.

Validation Engineer **(2003-2008)**

Irankhodro Powertrain Co., Tehran, Iran

- Planned and executed validation procedures for the "Iranian National Natural Gas Engine" for passenger cars.
- Designed and conducted engine functional and endurance tests, including preparing test procedures, gathering and analyzing measurement data, and preparing engineering reports.
- Performed failure analysis of engine parts and systems, and benchmarked automotive engines.
- Designed and developed in-house software for engine test data management and calculations.

PUBLICATIONS

Peer-Reviewed Journal Papers

- Traviss, N., Stanway, J., Woodward, J., Webler, T., Allen, G., & Ahmadi, M. (2025) Four-year community-wide PM2. 5 exposure characterization using a low-cost sensor network in a rural valley influenced by residential wood smoke. *Atmospheric Environment*, 360, pp. 121398.
- Ahmadi, M., Allen, G., Stanway, J., & Travis, N. (2025) Effect of operating conditions and technology on residential wood stove emissions of criteria, greenhouse gas, and hazardous air pollutants. *Journal of the Air & Waste Management Association*, 75 (6), pp 483-502.
- Traviss, N., Allen, G., & Ahmadi, M. (2024). Criteria, Greenhouse Gas, and Hazardous Air Pollutant Emissions Factors from Residential Cordwood and Pellet Stoves Using an Integrated Duty Cycle Test Protocol. *ACS ES&T Air*. https://doi.org/10.1021/acsestair.4c00135
- Keshmiripour, S., Johnston, P., & Ahmadi, M. (2022). Impacts of the COVID-19 pandemic on interlibrary loan and document delivery requests. *Journal of Library Resource Sharing*, *31*(1-5), 43-58.
- Humphries, K., Cooper, C., & Ahmadi, M. (2022). *Heavy-Duty Diesel Truck In-Use NO x Emissions Evaluation Using On-Board Sensors* (No. 2022-01-5098). SAE Technical Paper.
- Morin, B., Allen, G., Marin, A., Rector, L., & Ahmadi, M. (2022). Impacts of wood species and moisture content on emissions from residential wood heaters. *Journal of the Air & Waste Management Association*, *72*(7), 647-661.
- Morin, B., Ahmadi, M., Rector, L., & Allen, G. (2022). Development of an integrated duty cycle test method to assess cordwood stove performance. *Journal of the Air & Waste Management Association*, *72*(7), 629-646.
- Allen, G., Morin, B., Ahmadi, M., & Rector, L. (2022). Online measurement of PM from residential wood heaters in a dilution tunnel. *Journal of the Air & Waste Management Association*, *72*(7), 662-678.
- Ahmadi, M., Minot, J., Allen, G., & Rector, L. (2020). Investigation of real-life operating patterns of wood-burning appliances using stack temperature data. *Journal of the Air & Waste Management Association*, *70*(4), 393-409.
- Ahmadi, M., Graham, J., Shields, L., & Miller, P. J. (2018). Determination of Mercury and Other Trace Elements in Home Heating Oil Used in New York State. *Energy & Fuels*, *32*(1), 44-54.
- Rector, L., Miller, P. J., Snook, S., & Ahmadi, M. (2017). Comparative emissions characterization of a small-scale wood chip-fired boiler and an oil-fired boiler in a school setting. *Biomass and Bioenergy*, 107, 254-260.
- Ahmadi, M., John, K. (2015). Statistical evaluation of the impact of shale gas activities on ozone pollution in North Texas. *Science of the Total Environment*, 536, pp. 457-467
- Ghorbanian J., Ahmadi M. (2012). Experimental thermal analysis of cylinder block and head of a bi-fuel turbocharged engine. *Meccanica*, 47 (8), pp. 1987-2004

- Ahmadi, M., and Zibakalam, S. (2011) Science-Technology Relationship: Reconstruction and Critique of "Technology as Applied Science" Model. *Journal of Science and Technology Policy* (in Farsi). 3 (4), pp. 1-15
- Sajedin, A., Jazayeri, A., Ahmadi, M., Farhangian, O. (2011). Enhancing the starting torque of turbocharged SI engine using 1-D CFD simulation. *Applied Mechanics and Materials*, 110-116, pp. 4919-4924
- Ghorbanian J., Ahmadi, M., Soltani, R. (2011), Design predictive tool and optimization of journal bearing using neural network model and multi-objective genetic algorithm. *Scientia Iranica* 18(5), pp. 1095-1105
- Ehteram M., Ahmadi, M. (2011), Effects of piston oil jet parameters on the size and distribution of droplets in engine blow-by. *The Journal of Engine Research*, 19 (2), pp. 38-49
- Ahmadi, M. (2007). Intake, exhaust and valve timing system design using single and multi-objective genetic algorithms, *SAE Technical Papers* (from 8th International Conference on Engines for Automobile, Naples Section), SAE No.: 2007-24-0090.
- Ahmadi, M. (2006), Application of genetic algorithm to the development of MPFI engine intake and exhaust systems design. *The Journal of Engine Research*, 11(3), pp. 44-54
- Samimi, O., Ahmadi, M. (2006). Simulation & experimental study on optimization intake manifold of MPFI spark ignition engine. *The Journal of Engine Research*, 11(1), pp. 3-16

Conference Papers, Posters, and Processings

- Ahmadi, M., Kheslat, N. K., & Akintomide, A. (2024). Generative AI Impact on Labor Market: Analyzing ChatGPT's Demand in Job Advertisements. *arXiv preprint arXiv:2412.07042*.
- Keshmiripour, S., & Ahmadi, M. (2024). Leveraging Transferable Skills: Lessons for Applicants and Hiring Managers. Accepted to be presented at Access Services Conference, Atlanta, GA. Nov 19-21.
- Khoshkheslat, N., Ahmadi, M., & Akintomide, A. (2024). Shifting Job Market Trends: Analyzing the Impact of ChatGPT on Job Postings Using LDA and Text Mining. University of North Texas Research Day, Denton, TX. Oct 4-5.
- Ahmadi, M. (2024). Fairness in Institutional Research Predictive Models. Association of Institutional Research forum. Denver, CO. May 28-31.
- Ahmadi, M., Simon, J. (2024). Bridging the Gap: Generative AI and Challenged IR. Association of Institutional Research forum. Denver, CO. May 28-31.
- Ahmadi, M. (2024). Leveraging ChatGPT for Institutional Research: Techniques for Data Mastery and Reporting Excellences. Texas Association of Institutional Research Conference. Frisco, TX. March 26-49.
- Ahmadi, M. (2023). How money works? Estimating the influence of financial aid on student retention with different socioeconomic status. Texas Association of Institutional Research Conference. Houston, TX. Feb 16– Mar 1st.
- Ahmadi, M. (2023). Building Dashboards for Institutional Effectiveness Using SAS Visual Analytics. Texas Association of Institutional Research Conference, Houston, TX. Feb 16– Mar 1st.

- Ahmadi, M., Barton, M. (2023). Automating Graduation Rates at UNT: Multiple Perspectives on Success. Texas Association of Institutional Research Conference. Houston, TX. Feb 16 – Mar 1st.
- Ahmadi, M. (2022). Predicting Student Retention: COVID pandemic as an opportunity for a better model interpretability. Texas Association of Institutional Research Conference. Denton, TX. Feb 28 – Mar 2nd.
- Ahmadi, M., and et. al. (2018) Determination of Mercury and other Trace Elements in Home Heating Oil Used in New York State. Air and Waste Management Association 111th Annual Conference. Hartford, CT. June 25-28.
- Ahmadi, M., Allen, G., and Rector, L. (2018) Analysis of Stack Temperature Data to Identify Real-Life Use Pattern of Wood Burning Device. Air and Waste Management Association 111th Annual Conference. Hartford, CT. June 25-28.
- Ahmadi, M., (2017) Investigating spatial interpolation methods for ambient ground-level ozone pollution. 3rd NASA Health and Air Quality Applied Science Conference. Palisades, NY. Nov. 28-29.
- Ahmadi, M., (2016) Toward Higher Resolution and Accuracy in Air Pollution Data. NSF Sponsored Data Science Workshop, Seattle, WA. Sep. 15-16.
- Ahmadi, M. (2016) How to Reduce Ozone Pollution in Dallas-Fort Worth Area. Graduate Student Research Symposium (Federation of North Texas Universities). Denton, TX. Apr. 8.
- Ahmadi, M., (2016). The Structure of Values in Scientific Expertise: The Case of Fracking. Values in Medicine, Science, and Technology 6th Annual Conference, The University of Texas at Dallas, Richardson, TX. May 19-22.
- Ahmadi, M., John, K., (2015) Photochemical Modeling Assessment of the Contribution of Shale Gas Development on Ozone Pollution in North Texas. Air and Waste Management Association 108th Annual Conference. Raleigh, NC. June 22-25.
- Ahmadi, M. (2015) Big Data Mining Methods for Accurate Spatial Interpolation of Ozone Pollution, NSF Sponsored Data Science Workshop, Seattle, WA. Aug. 5-7.
- Ahmadi, M., Huang, Y., John, K. (2015) Predicting Hourly Ozone Pollution in Dallas-Fort Worth Area Using Spatio-Temporal Clustering. GeoComputation 2015 Conference, Dallas, TX. May 20-23.
- Ahmadi, M. (2015) Ozone Impact of Shale Gas Activities in Dallas-Fort Worth Metroplex. Graduate Student Research Symposium (Federation of North Texas Universities), Denton, TX. Apr. 10.
- Ahmadi, M. (2015) Evaluation of Three Major Emission Sources on DFW Ozone Level Using CAMx Photochemical Modeling. UNT Graduate Research Exhibition, Denton, TX. Mar. 7.
- Zhang, C., Ahmadi, M., & et. al. (2015). Piezoelectric Active Sensing System for Crack Detection in Concrete Structures. In Transportation Board 94th Annual Meeting (No. 15-2315). Washington, D.C. Jan. 11-15.
- Ahmadi, M., John, K. (2014) Impact of Natural Gas Hydraulic Fracturing on Ozone Pollution in Dallas-Fort Worth Area. In 16th Global Emissions Initiative Conference. Boulder, CO. June 10-11.

- Ahmadi, M., John, K. (2014). An Evaluation of the Correlation between Shale Gas Development and Ozone Pollution Within the Barnett Shale Region. In Fracturing Impacts and Technologies Conference. Lubbock, TX. Sep. 4-5.
- Ahmadi, M., John, K. (2014). An evaluation of the spatio-temporal characteristics of meteorologically-adjusted ozone trends in North Texas. In Air Quality Technical Meeting, North Central Texas Council of Government. Arlington, TX. Apr. 17.
- Ahmadi, M. (2014). Impacts of Fracking on Local Ozone Pollution in DFW Area. University of North Texas Graduate Exhibition. Denton, TX. Apr. 15.
- Ahmadi, M. (2014). What Science Can Give Us in Environmental Controversies? Inter-Departmental Colloquium, University of North Texas, Denton, TX. Sep. 26.
- Ahmadi, M. (2014). The question concerning risk. 47th Anniversary Meeting of the North Texas Philosophical Association. Denton, TX. Apr 3-5.
- Ahmadi, M. (2013). A Phenomenology of Landscape Photographs. The International Association for Environmental Philosophy Seventeenth Annual Meeting. Eugene, OR. Oct 26-28.
- Ahmadi, M. (2013). Why Do We Look at Landscape Photos? A Phenomenological Response. 46th Anniversary Meeting of the North Texas Philosophical Association, Denton, Texas. April 4-6.
- Ahmadi, M.(2013). A Survey of Shi'a Mujtahids on Environmental Ethics. Southwest Commission on Religious Studies. Irving, TX. Mar. 8-10
- Ahmadi, M. (2013). Social Imaginary of Risk: The Case of Fracking versus Global Warming in Denton. Inter-Departmental Colloquium, University of North Texas, Denton, TX. Nov. 1.
- Ahmadi, M. (2012). Use of Ecological Materials in Environmental Ethics Papers. Inter-Departmental Colloquium, University of North Texas, Denton, TX. Nov 16.
- Mohammadi, A., Hashemi, H., Jazayeri, A., Ahmadi, M. (2011). Two Phase Flow Simulation for Nucleate Boiling Heat Transfer Calculation in Waterjacket of Diesel Engine. ASME-JSME-KSME 2011 Joint Fluids Engineering Conference (AJK2011), Hamamatsu, Japan.
- Ahmadi, M., and et. al. (2009). Finite Element Analysis of Cylinder Head Gasket in Different Engine Condition. 6th International Conference on Internal Combustion Engines. Tehran, Iran. Nov. 18-20.
- M., Ahmadi, M. and et. al. (2009). Numerical and Experimental Investigation on Oil Droplet Deposition in Natural Gas Fueling Line and Parts in a Gas Engine. 6th International Conference on Internal Combustion Engines. Tehran, Iran. Nov. 18-20.
- Ahmadi, M. and et. al. (2009) Designing Water Jackets of a Diesel Engine by 1D and 3D Numerical Simulation. 6th International Conference on Internal Combustion Engines, Tehran, Iran. Nov. 18-20.
- Izanloo, H., Ahmadi, M. (2009). Developing new turbocharged natural gas engine: problems and solutions. 3rd Asian Natural Gas Vehicle conference, Donghae, South Korea.
- Ahmadi, M., Izanloo, H. (2008). Challenges and solutions in natural gas engine development and production. 17th Aachen Colloquium, Germany.
- Ahmadi, M. (2006). Application of genetic algorithm in the development of MPFI engine intake and exhaust systems design,15th Aachen Colloquium, Germany.

- Andalibi, P, Ahmadi, M. (2006). Turbocharging a bi-fuel engine to achieve equal power in natural gas and gasoline mode. ASME Internal Combustion Engine Spring Technical Conference, ICES2006-1435.
- Samimi, O., Ahmadi, M. (2006). A combined simulation & experimental study on optimization intake manifold of MPFI spark ignition engine. ASME Internal Combustion Engine Spring Technical Conference, ICES2006-1410.
- Mirsalim M., Ahmadi, M. (2005). Iran's NGV road-map; technology, policy and marketing, 1st Asian Natural Gas Vehicle conference, Kuala Lampour, Malaysia.
- Farkhooi, F., Rasoolizadeh, A., Ahmadi, M. (2004). Adoption of robotics technology transfer in Iran. 35th International Symposium of Robotics – ISR 2004, Paris, France.

Book Chapters

- Ahmadi, M., Huang, Y., & John, K. (2017). Application of Spatio-Temporal Clustering For Predicting Ground-Level Ozone Pollution. In Advances in Geocomputation (pp. 153-167). Springer.
- Ahmadi, M., Karbasforoosha, M. (2010). Computer Simulation in the Process of Product Design and Development. In Knowledge and Technology of National Gas Based Engine (Chapter 3). IPCO (Persian)

AWARD, GRANTS, SCHOLARSHIPS, RECOGNITIONS

- Ahmadi, A. (Principal), "Summer Research Grant," sponsored by G. Brint Ryan College of Business, University of North Texas, $10,000 Funded, 2024
- Finalist in the Humana-Mays Healthcare Analytics Case Competition, 2020.
- NASA Health and Air Quality Applied Sciences Team (HAQAST) travel grant for the 4th annual meeting at the University of Wisconsin-Madison, 2018
- NSF grant for participating in Data Science Workshop in Seattle, University of Washington, 2015 and 2016
- A $150k research fund from Downwinders at Risk Education Organiztion to assess the impact of natural gas fracking activities on air quality in the DFW area, University of North Texas, 2015-16
- Finalist in the UNT's Three Minute Thesis (3MT) Competition, University of North Texas, 2016
- The North Texas Association of Energy Engineers Scholarship, Texas, 2015
- NSF Travel Award for GeoComputation Conference, University of Texas at Dallas, 2015
- Third place award in the Graduate Exhibition of University of North Texas, 2014
- College of Engineering Scholarship, University of North Texas, 2014-15
- R.E.A.L Fellowship, Richardson Environmental Action League, University of North Texas, 2013
- College of Arts and Sciences Travel Grant, University of North Texas, 2013
- International Texas Public Education Grant, University of North Texas, 2012-13

- USC Scholarship, University of North Texas, 2012-13
- Academic Achievement Scholarship, University of North Texas, 2011-13
- Full Teaching Fellowship, Department of Philosophy and Religion Studies, University of North Texas, 2011-14
- World champion 2002 with Kavosh team, RoboCup Rescue - Robot League, Fukuoka, Japan, 2002

PROFESSIONAL AND COMMUNITY SERVICES

- Peer-Reviewer of Science of the Total Environment Journal and the Journal of the Air & Waste Management Association, 2014-Present.
- Speaker at the public hearing held by Denton City Council on “Renewable Denton Plan”, Denton, TX. Dec. 15, 2015.
- Speaker at the public hearing held by The U.S. Environmental Protection Agency on the proposed updates to the agency’s air rules for the oil and natural gas industry, Dallas, TX. Sep. 23, 2015.
- Speaker at the public hearing held by The U.S. Environmental Protection Agency on the proposed updates to the national air quality standards for ground-level ozone, Arlington, TX. Jan. 29, 2015.

SKILLS

- **Core Competencies**: Analytical thinking & problem solving | Excellent verbal and written communications| Team work | Time management and multi-tasking

- **Technical Skills**: Advanced Python for ML and NLP, R, VBA and Intermediate Fortran| Statistical modeling and testing | SQL, MongoDB | Data mining and ML for Hadoop-based technologies | SAS data warehousing, data mining, and visualization products | RapidMiner| ArcGIS & QGIS | Tableau, QlikView, and PowerBI