NARIMAN RAZAVI

UNIVERSITY INSTRUCTOR / LECTURER | COMPUTER SCIENCE, DATA SCIENCE, AI & INFORMATION SYSTEMS

Baton Rouge, LA | nrazav2@lsu.edu | LinkedIn | Google Scholar | GitHub

ACADEMIC PROFILE

Ph.D.-level educator, researcher, and technology professional with 5+ years of teaching experience as an Instructor and Teaching Assistant, 18+ years of software/IT experience, and interdisciplinary expertise spanning computer science, data science, artificial intelligence, enterprise systems, analytics, and robotics. Research and publications include machine learning, deep learning, computer vision, additive manufacturing, public-health analytics, autonomous robotic sensing, and intelligent facility management. Brings applied industry examples, research methods, and project-based technical problem solving into the classroom.

TEACHING QUALIFICATIONS & AREAS

Teaching Experience	5+ years as an Instructor and Teaching Assistant
Programming & Software	Python, Java, C/C++, SQL, web/application development, SDLC
Data Science & Analytics	Statistics, data preparation, visualization, regression, ANOVA, BI, data modeling
AI & Machine Learning	ML/DL, CNNs, TensorFlow/Keras, scikit-learn, computer vision, NLP
Information Systems	Systems analysis, databases, enterprise architecture, SOA, BPMN, ERP/CRM, ITIL/COBIT
Emerging Technology	Robotics, ROS 2, sensor/IoT integration, autonomous sensing, applied AI
Research Methods	Experimental design, model validation, reproducible analysis, technical writing and publication
Student Learning	Project-based instruction, applied problem solving, research-oriented learning

EDUCATION

Ph.D., Engineering Science | Louisiana State University 2026 **| *Baton Rouge, LA***
- Dissertation focus: autonomous robotic sensing, indoor environmental quality, mobile sensing methodology, data analytics, and intelligent facility management.

M.S., Computer Science | Southern University and A&M College 2019 **| *Baton Rouge, LA***
- GPA: 4.0. Thesis: Deep Learning Approach for Controlling Additive Manufacturing Process.

M.S., Software Engineering | Shiraz University 2005 **| *Shiraz, Iran***
- Thesis: Analysis, Design and Implementation of a Virtual University Educational System based on OKI service-oriented architecture.

B.S., Software Engineering | Azad University 2002 **| *Tehran, Iran***

ACADEMIC & RESEARCH EXPERIENCE

Research Assistant - Intelligent Facility Management | Louisiana State University Aug 2020 - Present **| *Baton Rouge, LA***
- Research autonomous robotic sensing and data-driven methods for intelligent facility management and indoor environmental quality (IEQ).
- Design mapping, mission/path-planning, navigation, sensor-ingestion, and experiment-data components for mobile robots; integrate robot, sensor, and environmental data for analysis.
- Work with ROS 2, TurtleBot 4/Temi, Boston Dynamics Spot SDK/API, gRPC/Protocol Buffers, Docker/Portainer, and external environmental-sensor APIs.
- Published and presented research in ASCE Computing in Civil Engineering proceedings (2026).

Graduate Research Assistant | Southern University and A&M College 2017 - 2019 **| *Baton Rouge, LA***
- Applied machine-learning and neural-network methods to regression and classification problems, including transfer learning and Inception-V3 for real-time additive-manufacturing defect detection.
- Developed CNN and logistic-regression models with TensorFlow/Keras/OpenCV; built training datasets, tuned hyperparameters, and evaluated model performance.
- Applied NLP/pattern-recognition techniques to market-basket and chatbot research; received Best Graduate Poster Presentation recognition at the Louisiana Academy of Sciences.

PROFESSIONAL EXPERIENCE

Product Manager, Data Architecture / IT Applications | Louisiana State University Jun 2021 - Present **| *Baton Rouge, LA***

- Manage and support mission-critical Facility Services applications and data workflows, including Accruent/FAMIS, APIs, SQL, Python automation, IBM Cognos/FAMIS Analytics, databases, and enterprise integrations.
- Translate operational needs into technical requirements, data products, reports, integrations, and automation while balancing user value, maintainability, data quality, and delivery constraints.
- Develop Python/Perl applications, API integrations, scheduled data processes, reporting solutions, and database-backed workflows supporting high-volume facilities and financial data.

Data Scientist | Pennington Biomedical Research Center 2019 - 2020 **| *Baton Rouge, LA***

- Designed NHANES datasets and ML/data-analysis pipelines using feature selection, missing-data treatment, scaling, outlier analysis, correlation, percentiles, normality/variance testing, t-tests, ANOVA, and post-hoc analysis.
- Developed and cross-validated body-fat estimation models using anthropometric data; performed hyperparameter search, model scoring, and evaluation of estimator performance and variance.

Data Scientist / Business Analyst / Software Engineer | Pars-Tamin Co. 2013 - 2016 **| *Tehran, Iran***

- Applied data analysis, machine learning, and BI to customer behavior and service analysis; created management dashboards and reports using QlikView.
- Developed SOA-based enterprise data-management services, Bonita business-process automation, Liferay CRM solutions, and automated QA/performance testing using Selenium and JMeter.

Enterprise Architect / Data Analyst | Information-Systems Co. 2006 - 2012 **| *Tehran, Iran***

- Designed process, data, application, and technology architectures using Zachman, EAP, BPMN, Agile/RUP, ITIL, and COBIT; performed SQL ETL and analytical reporting across office-automation, health, and financial domains.
- Aligned business and IT through systems analysis, strategic analysis, service-oriented architecture, reference architectures, and process improvement.

SELECTED PUBLICATIONS & SCHOLARLY WORK

- Towards Intelligent Facility Management: Autonomous Robotic Sensing for Enhanced Indoor Environmental Quality. ASCE Computing in Civil Engineering, 2026.
- Automated Quality and Process Control for Additive Manufacturing using Deep Convolutional Neural Networks. Recent Progress in Materials, 2021.
- Calf circumference: cutoff values from the NHANES 1999-2006. The American Journal of Clinical Nutrition, 2021.
- Toward Enabling a Reliable Quality Monitoring System for Additive Manufacturing Process using Deep Convolutional Neural Networks. arXiv, 2020.
- Smart Additive Manufacturing Empowered by a Closed-Loop Machine Learning Algorithm. SPIE Smart Structures + Nondestructive Evaluation, 2019.
- Deep Learning Enables Fully Automated Analysis of Microscopy Images. Louisiana Academy of Sciences, 2019 - Best Graduate Poster Presentation.
- Comparison of Standards and Technologies of BPMS as a Software Development Infrastructure. Second Conference on Electronic City, 2009.
- Design and Implementation of a Comprehensive Virtual University System based on OKI Standard Architecture. Second National ICT Conference, 2006.

CERTIFICATIONS & PROFESSIONAL DEVELOPMENT

- deeplearning.ai / Coursera: Neural Networks and Deep Learning; Improving Deep Neural Networks; Structuring Machine Learning Projects; Convolutional Neural Networks; Sequence Models (2019).
- COBIT Foundation; ISO 20000 Auditor; ISO 27001 Internal Auditor.
- Researcher Qualification, Science, Research and Technology Ministry of Iran (2005).
- ICT Consultant Qualification, National Iranian ICT Guild Organization.

TECHNICAL SKILLS

Languages & Data: Python, R, SAS, SQL/MySQL, Java, C/C++, JavaScript, Pandas, NumPy, scikit-learn, TensorFlow, Keras, OpenCV. **Platforms & Methods:** IBM Cognos, QlikView, Selenium, JMeter, ROS 2, Docker, Git/GitHub, SOA, BPMN, Zachman, EAP, ITIL, COBIT, Agile/Scrum/RUP, statistics, data modeling, ETL, machine learning, deep learning.