

Maulik Shah

AI Software Engineer

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EDUCATION

- **University of Georgia** Athens, GA
Master of Science in Artificial Intelligence Aug 2016 - May 2019
- **Gujarat Technological University** Ahmedabad, India
Bachelor of Engineering in Computer Engineering Jul 2008 - July 2012

TECHNICAL SKILLS

- **AI:** Multi-agent Decision Planning and Reinforcement Learning, Classical Machine Learning and Statistical Models, Deep Learning and CNNs, Data Visualization, Motion planning in Robotics, Evolutionary Algorithms, etc.
- **Software Engineering:** Data Engineering, System Integration, Application Development, Versioning, Unit Testing, etc.
- **Programming Languages:** Python, Java, C#, C++, SQL/PLSQL, R, VBA, LaTeX, etc.
- **Frameworks and Libraries:** PyTorch, Spark, ROS, OAF and ADF for Oracle EBS, Oracle SOA, Git, etc.
- **Platforms:** Microsoft Azure, Google Cloud, etc.

PUBLICATIONS

- Adam Eck, **Maulik Shah**, Prashant Doshi, and Leen-Kiat Soh. "Scalable Decision-Theoretic Planning in Open and Typed Multiagent Systems." In **Thirty-Fourth AAAI Conference on Artificial Intelligence. 2020.**
 - A novel decision-theoretic individual planning framework for multi-agent(robot) systems involving agents in hundreds.
 - Real world use cases: decision planning in a collaborating team of fire-fighting robots, autonomous ride sharing cabs.

ACADEMIC PROJECTS (MORE IN PORTFOLIO)

- **Parkinson's disease prediction by applying deep learning to fMRI images:** Mar 2018 - May 2018
 - Segmented and registered 3D brain fMRI image dataset (200+ GB) to identify healthy or pathogenic brain states.
 - Implemented a deep learning framework, V-NET, in PyTorch on NVidia on-premise and GCP GPU machines in a team of 2.
- **Analysis of EU amendment delegation to third-party authorities:** Apr 2017 - Jun 2017
 - Built classification model for amendments' delegation using classical NLP techniques and data visualization methods in R.
- **Documents classification of Reuters's dataset over 100 GB in size:** Jan 2018 - Feb 2018
 - Built distributed classification model using NLP methods like Naive Bayes and SVM with the Apache Spark framework on GCP clusters, while achieving a 90%+ accuracy in a team of 3.
- **Finding neurons' spark in fMRI images with classical computer vision:** Feb 2018 - Mar 2018
 - Segmented brain fMRI images to identify neurons with methods like NMF to achieve impressive accuracy in a team of 3.
- **Sudoku Solver with genetic algorithms:** Nov 2016 - Dec 2016
 - Designed a parallel and dynamically parameterized genetic algorithm that solved Sudoku as a constraint satisfaction problem.

RELEVANT EXPERIENCE

- **Johnson Controls** Milwaukee, WI
AI Software Engineer Jun 2019 - May 2020
 - Led a team of 5 to implement an Integration API, which connects ML models to end-user products.
 - Implemented a Weibull model to predict reliability of equipment at a given age using multiple data sources.
 - Modeled entity-relationship schema definitions in CosmosDB for representing space, assets, and points in a building.
- **EITS, University of Georgia** Athens, GA
Student Worker in Student Information and Systems Team Feb 2017 - Feb 2018, May 2018 - May 2019
 - Automated the data-warehousing snapshots, thereby avoided manual scheduling tasks.
 - Conducted data migration, reconciliation, and reporting involving academic records in millions.
 - **Was awarded UGA Student Employee of the Year, 2017.**
- **Evolutionary Systems Pvt. Ltd.** Ahmedabad, India
Technical Consultant in Application Development Team Aug 2012 - Aug 2016
 - Contributed to 10+ enterprise projects globally reaching a user base in thousands for front-back end application development, workflow design, system integration and technical consulting, primarily in Oracle ERP, SOA, and database technologies.
 - Helped the company to retain project knowledge with industry standard documentation, training, and mentoring.

VOLUNTEER EXPERIENCE

- **While in Milwaukee:** Code for Milwaukee, SEA literacy (Tutoring refugee kids).
- **While in UGA:** UGA Graduate School Emerging Leader Program, UGA Red Cross, Speak Out for Species at UGA, etc.
- **Others:** AIESEC in Ahmedabad, India.