

**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.
- **Languages:** Python, Java, C#, C++, SQL/PLSQL, R, VBA, LaTeX, etc.
- **Frameworks:** PyTorch, Spark, ROS, Plotly and Dash, 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.

## SIGNIFICANT 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.

## 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 reliability model for equipment maintenance prediction using multiple data sources.
  - Modeled entity-relationship schema definitions in CosmosDB for representing space, assets, and points in buildings.
- **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, primarily in Oracle ERP domain, reaching to thousands of users.
  - Worked on System Design and Integration, Data Engineering using SQL, PL/SQL, and System/Data Architecture for applications including employee time-sheets, supply-chain requisitions, warehouse applications, HR services, etc.
  - 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.