

Ronit Shaw

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Education

University of California, San Diego

Master of Science, Electrical Engineering, 3.7/4.

La Jolla, CA

June 2018

Indian Institute of Technology, Guwahati

Bachelor of Technology, Majors: Mechanical Engg, Minor: Computer Science and Engg, 8.95/10.

India

June 2016

Experience

Microsoft

New York, NY

Senior Software Engineer

January 2021 – Till Date

- **Project Lead, Model Hosting Framework (MHF):** Designed and implemented a self-service platform for deploying Machine Learning Services at scale to Azure Kubernetes Service (AKS). The platform supports over 10 production-grade ML microservices, ensuring APIs run within latency SLAs and zero downtime. The framework is now used across multiple tenants and services, including UPA Fraud Detection and TSG Autopilot, supporting over 500K monthly calls with ~99% availability.
- **Patent Contributor – Retrieval-Augmented Generation System (505210-US01):** Co-inventor of a patented system that enhances enterprise knowledge discovery by integrating vector databases, identity enrichment engines, and agentic code generation workflows. The system dynamically adapts to user behavior, enabling real-time, context-rich answers and executable code. It is deployed across Azure Core to support intelligent copilots and internal search experiences.
- **Lead, Secure Future Initiative (SFI):** Spearheading security and compliance transformation across Azure Core Insights. Led Waves 2–4 of SFI, completing over 500+ security remediations, raising Get Secure Score above 650, and driving the organization toward a fully secret less architecture.
- **Developer, Azure Support Ticket Summarization and Root Cause Analysis Service (CARET):** Built a scalable service using multi-agent LLMs (DERA) and Azure OpenAI to generate summaries and Q&A insights from support tickets. The platform processes over 30,000 tickets per day, enabling product teams to triage and prioritize issues efficiently.
- **Infrastructure Architect, Scalable OpenAI AKS Endpoint:** Developed a robust infrastructure with 30 independent Azure OpenAI services to overcome token throttling and concurrency limits. Published a LangChain-based Python package to simplify integration and usage across teams.
- **Lead Improvement, Azure Support Topic Recommendation Service (Wayfinder):** Delivered a 3-point increase in coverage, 1-point accuracy improvement, and 60% latency reduction, significantly improving support routing and customer experience.
- **CI/CD Pipeline Architect:** Designed and deployed CI/CD pipelines for Wayfinder and Azure Service Recommendation Service (Service Predictor), reducing maintenance overhead by 12% and accelerating deployment velocity.
- **Backend Lead, Azure Case Submission Autosuggest Service:** Led the design and deployment of a backend service that enhances the support case submission experience through intelligent autosuggestions.
- **Project Lead, Azure Workload Identification:** Conducted large-scale clustering and BERT-based topic modeling across Azure subscriptions to identify workload patterns linked to customer churn. Developed an automated algorithm to prioritize backlog items and reduce attrition.
- **Developer, IcM Team Prediction Service:** Implemented and deployed a team prediction service using Azure Cognitive Search in AKS to intelligently route incidents to the most relevant engineering teams.

IBM

Emeryville, CA

Cognitive Software Developer

June 2018–Jan 2021

- Developed **Deep Learning models for multi-label classification of time series network transfer session data.**
- Created **real-time anomaly detection models** using LSTM and Autoencoder Decoder Models for data transfer sessions.
- **Designed software components** and served as a **backend developer** for **IBM Aspera Automation module Orchestrator.**
- **Led Centralized Control Plane Hill for IBM Aspera** as part of **IBM's Cloud Pak for Integration** as a Service initiative.
- **Developed microservices and open service brokers** for IBM's Cloud Pak for Integration as a Service initiative.

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IBM

San Jose, CA

Machine Learning/Deep Learning Internship

June 2017 – September 2017

- Contributed to the **Cognitive Enterprise Data Platform** by collecting and curating large-scale company datasets to support classification of Government-Owned Entities (GOEs).
- Developed deep learning models using TensorFlow and **Convolutional Neural Networks (CNNs) for NLP tasks**, achieving over 97% predictive accuracy.
- Built and evaluated NLP pipelines using Python libraries (SpaCy, NLTK, Gensim) and compared traditional ML models (e.g., Random Forest, Gradient Boosting) with deep learning architectures for optimal performance.

University of California, San Diego

La Jolla, CA

Graduate Teaching Assistant

March 2017 – March 2018

- Supported instruction and student engagement across three core statistics and probability courses: **PSYC 60: Introduction to Statistics (Winter 2018)**, **CSE 103: Introduction to Probability and Statistics (Fall 2017)**, and **ECE 109: Engineering Probability and Statistics (Spring 2017)**.
- Led weekly discussion sections, held office hours, and provided one-on-one academic support to students, helping them grasp foundational concepts in probability theory, statistical inference, and data analysis.
- Collaborated with faculty to design assignments, grade exams, and deliver review sessions, contributing to improved student performance and course satisfaction.

Judging & Evaluation

- **Judge, Global Hackathon 2025 – AI Foundry Challenge**
Invited by Microsoft to serve as a judge for the AI Agent(s) from AI Foundry topic challenge during the Global Hackathon. Evaluated projects across five categories, scoring technical feasibility, innovation, and impact. Contributed to identifying the top 0.7% of solutions from over 1,100 global entries, spanning areas such as climate action, healthcare, cybersecurity, and AI ethics.
- **Judge, NYU SPS DPB X Microsoft AI Accelerator Challenge (2025)**
Invited by NYU and Microsoft to serve as a judge for the AI Accelerator Challenge Pitch Event, where students presented innovative and scalable AI-driven solutions. Evaluated projects alongside leaders from the NYU Entrepreneurial Institute and Microsoft, assessing technical feasibility, business impact, and innovation. Contributed to the selection of winning teams across categories such as Best Overall, Most Innovative Idea, and Best Presentation. [LinkedIn Post](#)
- **Judge, Code4Hope 2025 STEM Hackathon – Sustainability Track**
Invited to judge the Sustainability category at the Code4Hope STEM Hackathon hosted at Microsoft Times Square. Reviewed live student presentations both in-person and virtually, scoring projects on innovation, impact, and technical execution. Supported Microsoft's commitment to youth innovation and sustainability through mentorship and evaluation.

Awards & Honors

- **Mitacs Globalink Research Internship Award (2015)**
Selected for a prestigious 12-week international research program in Canada, funded by the Government of Canada and the Province of Alberta. Recognized for academic excellence and research potential.
- **Gold Medalist – 4th National Biotechnology Olympiad (India)**
Achieved All India Rank 9, State Rank 1. Honored for outstanding performance in a nationwide competition focused on biotechnology and life sciences.

Skills

Programming Languages: Python, C++, Golang, Ruby, SQL, Bash

AI/ML & NLP: TensorFlow, Keras, Scikit-learn, BERT, LSTM, CNNs, Autoencoders, RAG, Claude, MCP, Agentic Workflows

Cloud & DevOps: Azure (AKS, Cognitive Search, DevOps), Docker, Kubernetes, Terraform, CI/CD

Data Science & Processing: Pandas, NumPy, SpaCy, NLTK, LangChain, Azure OpenAI