Athar Sheikh

+1 (574) 292 5019 — thesheikhz.athar@gmail.com — github.com/Sheikh-Athar —
linkedin.com/in/athar-sheikh-384298120/ — google-scholar/athar

---

Education

MS in Computer Science
University of Notre Dame, Indiana, USA 2023-2025
GPA: 3.62/4.0
BS in Information Science
RV College of Engineering, Bangalore, India 2016-2020
GPA: 8.6/10

Relevant Coursework: Advanced Algorithms, Graduate Operating Systems, Human-Computer Interaction, Graph Neural Networks, Advanced Computer Architecture, Data Visualization, Networks, Secure Software Engineering

Professional Experience

Graduate Research Assistant Aug 2024 - May 2025
University of Notre Dame, Notre Dame, IN
- Developed a framework integrating RAG with LLMs for enhanced accuracy in IoT administrative tasks.
- Fine-tuned a BERT model for IoT anomaly detection to proactively address cybersecurity risks.
- Designed a unified framework combining RAG-based contextual question answering with BERT-based anomaly detection.

Software Engineer 2 Jan 2022 - Aug 2023
JP Morgan Chase & Co., Bangalore, India
- Led financial reporting tool development for UK clients, ensuring accurate trial balance creation.
- Designed UI screens, developed APIs, and optimized data retrieval with efficient SQL queries.
- Managed on-call duties for service reliability across multiple regions.

Software Engineer 1 Aug 2020 - Dec 2021
JP Morgan Chase & Co., Bangalore, India
- Built dashboards for EMEA and NAMR clients, ensuring front-end and back-end consistency.
- Accelerated release cycles by automating CI/CD pipelines across environments.
- Improved database performance by 40% through indexing and partitioning.

Software Intern Jan 2020 - Aug 2020
JP Morgan Chase & Co., Bangalore, India
- Developed interactive UI components using React and automated processes with advanced filtering techniques.

Publications

- Daniel Worae, **Athar Sheikh**, Spyridon Mastorakis (2025). *A Unified Framework for Context-Aware IoT Management and State-of-the-Art IoT Traffic Anomaly Detection.* ***ICDCS*** *2025.* **Submitted**.
- **Sheikh, A.**, Bs, A. (2020). *Decomposing Monolithic Systems to Microservices. 2020 3rd International Conference on Computer and Informatics Engineering (**IC2IE**)*, Yogyakarta, Indonesia, IEEE.

Research Projects

Machine Learning for TCP Throughput Prediction Aug 2024 - Dec 2024
Networks, Course Project

- Developed models using clustering and regression algorithms to analyze network performance data and predict TCP throughput by manually installing Raspberry Pis in 30+ participants homes.

Graph Neural Network-Based Vulnerability Detection in Source Code Aug 2024 - Dec 2024
Secure Software Engineering, Course Project

- Developed a GNN model for detecting code vulnerabilities using syntactic and semantic analysis with ASTs and NetworkX.

Hybrid Graph Neural Network for Image Classification Jan 2024 - May 2024
Data Visualization, Course Project

- Developed and optimized a hybrid graph neural network (HGNN) model for image classification, achieving significant results.

Personalized Dietary Recommendations Using Graph Learning Aug 2023 - Dec 2023
Graph Neural Network, Course Project

- Constructed heterogeneous graphs and evaluated various baselines (LightGCN, GCN, GraphSAGE, GAT) for link prediction tasks.

Machine Learning for System Modeling and Performance Prediction Aug 2023 - Dec 2023
Graduate Operating System, Course Project

- Analyzed performance metrics of applications on GPUs and single-core processors using linear, non-linear, and mechanistic-empirical models.

Learning Management System Aug 2023 - Dec 2023
Human-Computer Interaction, Course Project

- Developed high-fidelity prototypes to integrate absent functionalities into Canvas, based on research through semi-structured interviews.

Inbound Processing Service Jan 2020 - Aug 2020
Final Project, Bachelor's Degree Requirement

- Developed file upload handlers and preprocessing routines to manage inbound data, enhancing data filtering and storage efficiency.

Skills

- **Programming:** Python, C/C++, C#, Java, CUDA, Matlab, Git, LaTeX, Vim
- **Web Development:** HTML/CSS, JavaScript, MySQL, XML, React
- **Software:** Numpy, Matplotlib, NetworkX, Linux, TensorFlow, PyTorch, Docker, OpenCV, .NET Core

Certifications

- Machine Learning Specialization, Coursera (2024)
- Android Development, Udacity Nanodegree (2017)
- CS50, Harvard University (2017)

Achievements

- 2nd place, Code Wars 3.0, RVCE Bangalore
- Bronze Medal, HackerRank (Week of Code 38, World Code Sprint 13)