BHARGAV KRISHNA THOTA

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LinkedIn | GitHub | Publications | Portfolio

SUMMARY

A PhD graduate with 3+ years of professional software engineer experience and a background in backend systems, automation and applied research. Experienced working on backend services, automation workflows, and system observability pipelines. Strong foundation in data structures, algorithms, distributed systems concepts, with a keen interest in cloud-native and platform engineering.

EDUCATION

Doctor of Philosophy (Ph.D.) in Computer Science and Engineering | Southern Illinois University, Carbondale | GPA: 3.78 | Dec 2025
Master of Science(M.S) in Computer Science | University of Illinois, Springfield **|** GPA: 3.87 | May 2017
Bachelor of Technology in Computer Science and Engineering | Jawaharlal Nehru Technological University, India | Apr 2015

SKILLS

Programming Languages: Java, Python
Backend & Systems: Application development, real-time communication systems, exposure to distributed systems concepts
Automation: Bash scripting, CI/CD pipelines (Jenkins)
Databases: SQL, MySQL, NoSQL(Neo4j)
Web Technologies: HTML, CSS, Javascript, JQuery
Tools: SVN, Git, Jupyter Notebook

PROFESSIONAL EXPERIENCE

Software Engineer **Enfusion,** Chicago, IL Sep 2017 – Aug 2020

- Developed and maintained backend components of a portfolio management system used by hedge fund clients, emphasizing data accuracy and system reliability.
- Automated secure data ingestion from external financial systems using Secure FTP protocols and custom Bash scripts using Jenkins jobs to schedule, reducing manual intervention and improve operational reliability.
- Designed ETL pipelines for cleaning, normalization and aggregation processing daily transactions.
- Authored and optimized complex SQL queries for MySQL, creating schemas, tables, and indexes to increase query performance.
- Streamlined end of the day trade reporting by developing JAXB-based XML parsers for automated report generation.
- Collaborated with cross-functional teams to troubleshoot production issues, analyze logs and improve system stability.

Assistant System Engineer **Tata Consultancy Services,** India Jun 2015 - Jan 2016

- Contributed to the design and development of Java/J2EE Web Application using MVC architecture. Coded Data Access Objects, Service Controllers, and validation classes to implement core application logic.
- Assisted in debugging, testing, and maintaining enterprise application components.

ACADEMIC EXPERIENCE

Graduate Research Assistant **Southern Illinois University,** Carbondale Aug 2022 – Dec 2025

- Designed and developed XArgue, a cross-platform application with real-time communication and data analytics.
- Contributed to backend services using Java and Neo4j to support graph-based data storage and analysis.
- Implemented real-time messaging functionality using Socket.IO, focusing on reliability and low-latency communication.
- Used centralized logging and monitoring tools (Grafana, Loki) to observe system behavior, analyze performance issues.
- Conducted performance analysis and debugging using logs and metrics to identify system bottlenecks.

Graduate Teaching Assistant **Southern Illinois University**, Carbondale Aug 2020 – Dec 2025

- Instructed CS-200B Computer Concepts course, covering algorithms, AI, computer organization, and programming languages.
- Teaching Assistant for CS-436 Artificial Intelligence, CS-537 Advanced Expert Systems, CS-480 Computational Statistics II.
- Mentored undergraduate and graduate students and supported course operations, emphasizing clear communication and problem-solving.
- Migrated cadence and synopses tools from CentOS to Ubuntu 22.04 by developing and modifying scripts to ensure software compatibility.

PROJECTS

Assessing the Impact of Social Networks on Argumentation

- Developed a mobile application of cyber argumentation with social networking featuring collective opinion analytics.
- Proposed novel quantitative models to quantify the impact of social networks on the formation and evolution of collective opinion and outlier opinions in argumentation.

Skills: Java, Python, Neo4j, Socket.io, Javascript, Numpy, Pandas, Matplotlib, Networkx

Forecasting Volatility of USD/INR

Built LSTM-based deep learning models with dropout, layer normalization, and early stopping. Tuned sequence length (200 timesteps), achieving 98.9% prediction accuracy.

Skills: Python, Keras, Numpy, Pandas, Matplotlib, Time-Series Forecasting

AWARDS

Dissertation Research Award, Fall 2023 and Spring 2024.
Best Student Paper, ASONAM 2023, Kusadasi, Turkey.