Ganesh Prabakaran

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Education

M.S. in Computer Science and Engineering (GPA: 3.6/4.0) Jan 2024 – Jun-2025
State University of New York, Buffalo, NY

B.E. in Computer Science and Engineering (GPA: 8.1/10.0) Sep 2017 – Jun 2021
Anna University, Tamil Nadu, India

Technical Skills

Languages: GOSU, Java, Python, C/C++, SQL, JavaScript, TypeScript, HTML, R
Web Development: Spring Boot, MVC, React, Angular, Flask, Hibernate, Maven, Node.js
Databases: MySQL, MongoDB, PostgreSQL, NoSQL
Cloud and DevOps: AWS, Docker, Kubernetes,Azure
ML/Data Engineering: TensorFlow, Keras, PyTorch, Scikit-Learn, CUDA, Kafka, Spark, Hadoop
Tools/Technologies: Guidewire Studio, COLMAP,Git, REST API, Unix/Linux, Postman, Jira, JUnit

Experience

State University of New York Buffalo, NY
Research Assistant / Graduate Assistant May 2025 – Present

- Optimizing high fidelity 3D reconstruction pipeline combining NeRF and multi-view stereo; fine-tuned and debugged research scripts and implementing custom utilities to extract depth/disparity and generate point clouds from real captures, and documented results in evaluation reports.
- Assisted Professor Naeem Maroof in teaching CSE 587 (Data Intensive Computing); collaborated with TAs to clarify complex concepts for 200+ students, graded assignments/projects/exams, and provided constructive feedback to improve students' understanding of large-scale data processing.

Hexaware Technologies Chennai, TN
Associate Software Engineer Mar 2022 – Nov 2023

- Worked on integration of third-party VIN services and customization of Refresh/Retrieve flow to auto-populate vehicle and policy data from external rating engines reducing manual entry errors and effort by 30%.
- Collaborated on integrating SmartCOMM with Guidewire PolicyCenter by configuring document triggers and mapping data fields for automated generation of policy schedules and endorsement letters, reducing manual document preparation time by $\tilde{3}$0% and accelerating delivery to customers.
- Implemented 10+ PCF views and pages for endorsements and mid-term adjustments to enhance user navigation and cutting support tickets by 18% while ensuring 100% compliance with bundled-product regulatory requirements.
- Designed efficient test plans, cases, and reports—adaptable for automation—that boosted productivity by 45%, and led cross-team JIRA triage to uncover 50+ critical to high priority defects, preventing critical post-deployment bugs by 21%.

Projects

TransLingua: Real-Time ASL to Text | *Python, OpenCV, MediaPipe, TensorFlow* Apr 2025

- Designed a real-time pipeline that fuses MediaPipe hand-landmark tracking with a motion-based switch to route inputs to either a CNN (static signs) or LSTM (dynamic phrases).
- Delivered an 92% overall accuracy system running at 30 FPS on CPU, with robustness to varied lighting and signer profiles.

Text Summarization using Deep Learning | *Python, Keras, TensorFlow* Jan 2025

- Trained LSTM, GRU, RNN models on Hugging Face data — LSTM achieved best ROUGE score, improving summary precision by 18% through hyperparameter tuning and fine-tuning.
- Brought down document processing time by 30% with a Flask API, streamlining the summarization process forend-users.

Personalised Job Recommendation System | *Python, NumPy, Pandas, Scikit-learn, Flask* May 2024

- Enhanced recommendation accuracy by 22% with SVM on a 1.3M LinkedIn job listings dataset and improved user relevance through hyperparameter optimization.
- Deployed Flask web app for real-time recs and shortened job search time by 40% for users.