Gaurav Patil

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SUMMARY

Computer Science Master's graduate with expertise in software development, data science, and natural language processing (NLP). Demonstrates a strong ability to apply technical skills and analytical reasoning to develop innovative solutions and drive effective outcomes in technology-driven environments.

EDUCATION

Illinois institute of technology, IL — May 2025

Master in Computer Science

Coursework: Natural Langauge Processing, Mobile Application Development, Sciene of Programming

Savitribai Phule Pune University, India — May 2019

Bachelor of Engineering in Information Technology

SKILLS AND CERTIFICATIONS

Technical Skills: Advanced multithreading, Memory management, TCP/IP stack, Network programming
Frameworks: Django REST Framework, Flutter, Flask, Flask-RESTful, TestNG, NUnit
Libraries: Flat buffers, ZeroMQ, Boost, STL, ASN, TensorFlow, Keras, Torch, NLTK, SpaCy, Pandas, Scikit-Learn, Threading, Multiprocessing, Requests, Tableau
Tools & Technologies: Docker, MySQL, Oracle, MongoDB, SQLite, Jupyter, Xcode, Maven, Postman, Tableau,Make, CMake Wireshark, Github, BitBucket, Jenkins, GCP, AWS, Linux, Windows, macOS, Swagger, Confluence, Jira
Programming: C, C++, Python, Dart, Java, Javascript, SQL, HTML, CSS, Bash

WORK EXPERIENCE

Software Engineer — Sept 2021 - Dec 2022

Alef

- Partnered with the CTO to innovate an in-house network solution, addressing latency and jitter calculations in a private mobile network, achieving **$400,000** in annual savings by cutting third-party services
- Led the development of a **Prometheus-compatible** custom exporter for real-time KPI metrics transfer from Alef edge to **AWS Prometheus**, significantly enhancing data visibility and operational efficiency.
- Developed a high-efficiency reporting engine, achieving over **100K records processed per second** using **Python Dask and AWS MSK**, which resulted in a **50% improvement** in query performance and substantial AWS cost savings.
- Spearheaded the development of a **broker-less PUB/SUB model in C++**, employing **ZeroMQ and Flat Buffers** for **secure data transmission**, enhancing edge-to-central site communications
- **Managed a team of 4** to advance multi-tenancy capabilities in private mobile networks, resulting in **40% reduction in IP allocation** requirements
- Excelled in designing **thread-safe** data structures with **advanced C++ synchronization** methods strengthening the **concurrency and data integrity** in network systems

Software Engineer — Oct 2019 - Sept 2021

GlobalLogic, A Hitachi group of company

- Developed and deployed **RESTful web services** using **Django REST** framework, cutting API response times by 20% and enhancing system scalability to support over 10,000 concurrent users
- Streamlined deployment processes with **CI/CD** pipelines reducing deployment times by **50%**, facilitating 5+ weekly automated deployments, significantly boosting productivity and operational efficiency
- Implemented **SQL scripts** to streamline KPI analysis and resolve issues, achieving a **15% boost** in performance. Also developed expertise in Azure DevOps during the project
- Automated **150+ test cases** and engineered a BDD framework using Java and Selenium, reducing manual efforts by 70%, halving test cycle time, and boosting coverage by 40%

PROJECT

- **Character level language model using Transformer**
  Developed a compact PyTorch-based character-level language model, generating unique text like company names. The model's versatility supports MLP, CNN, RNN, LSTM, and Transformer structures in a streamlined single-file design
- **Real time violence detection using machine learning**
  Developed a real-time public violence detection system with CNN and RNN algorithms, achieving an F1 Score of 95.5%, enabling swift threat information relay to authorities and optimizing video data processing for accuracy

ADDITIONAL QUALIFICATIONS

- **Winner of GL Sparks 30 Hacks Coding Contest at GlobalLogic 2020**: Strategic thinking and Teamwork
- **Winner of code vita coding competition amongst 280 participants**: problem-solving