

ROHAN PRASAD

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EDUCATION

The Pennsylvania State University; Master of Science Computer Science Aug 2023 – May 2025
Courses: Operating Systems, Data Structures, Computer Architecture, Machine Learning. State College, PA

Manipal Institute of Technology; Bachelor of Technology Computer Science Jul 2019 – Jun 2023
CGPA: 9.52; Courses: Algorithms, OOP, DBMS, Computer Networks, Distributed Systems. Manipal, KA

EXPERIENCE

SAP May 2024 – Present
AI/ML Scientist Intern - Gen AI + AI Agents Palo Alto, CA

- Developed & implemented LLM-powered **Multi-Agent Systems** in SAP Joule, optimizing agent coordination by 30%.
- Leveraged **Autogen, CrewAI & LangGraph** to build POCs with **RAG** with 20+ agents demonstrating scalability.
- Optimized token utilization of LLMS with 100M+ parameters with **DSPy & fine tuning** for SAP Joule functions.

Akamai Technologies Jan 2023 – Jul 2023
Software Engineer Intern Bangalore, KA

- Architected a **Parquet File Parser** in C using **Context Free Grammars & Finite State Machine** principles.
- Enhanced system diagnostics by 12% with **Opentelemetry, Prometheus & Grafana** to build a monitoring solution.
- Automated deployment of **helm charts** on **Kubernetes** in 3 modes on **Jenkins CI/CD** pipelines using bash scripts.
- Designed over 10 **KPI SLA Grafana Dashboards** to monitor traffic on OTTs, running efficient **SQL** queries via API.

NeoDocto Inc. Feb 2022 – Apr 2023
Data Analyst Intern Bangalore, KA

- Spearheaded 2 projects to analyze trends and patterns in customer orders and online reviews using **Data Analysis**.
- Examined, summarized and reported detailed insights in 20+ data sets to 3 departments to make data driven decisions.
- Leveraged **MSExcel, SQL, Google BigQuery, Tableau & Python 3, R-Studio, Pandas** to visualize critical data.

PROJECTS

Parallel Algorithms for Max Flow in a Network | *CUDA, GPU Programming, Graph Analytics* Jan 2024 – Apr 2024

- Achieved **4x speedup** on sparse RLG & GenRMF graph by implementing **lock-free async push-relabel algorithm**.
- Evaluated performance of precolor-based and async algorithms across **3 graph types**, analyzing memory efficiency.
- Optimized GPU utilization to **100%** during parallel execution, reducing kernel execution time for dense & sparse graph.

Parallel File System & Synchronizer using Path Expressions | *C, C++, gRPC, Protobuf.* Aug 2023 – Dec 2023

- Programmed a **Parallel File System** with 3 components Client Machines, Metadata Server and File Servers.
- Streamlined communication between 3 components via RPC Calls based on Proto file message formats in **Protobuf**.
- Constructed a **synchronizer** using linked lists to parse 2 path expressions to serialize file read and write operations.

Simulation of Routing Algorithms in Specialized Graphs | *Python, NetworkX, Matplotlib* Oct 2024 – Dec 2024

- Implemented and simulated **shortest-path algorithms** such as Dijkstra and A* on graph representations of networks.
- Analyzed **performance metrics** like path cost, execution time, and scalability on large, weighted graphs.
- Visualized routing paths and traffic flow on specialized graphs using **Matplotlib**, providing actionable insights.

Deep Learning Models for Brain Tumor Classification | *Python, Tensorflow, Keras, Pandas* Jan 2022 – Jun 2022

- Devised CNNs and applied principles of **Ensemble learning** to aggregate classification results of 2 models.
- Performed a **comparative analysis** between VGG16 and InceptionNetV3 focusing on the effect on classification result.
- Evaluated and compared the model performance **accuracy** and **sensitivity** and obtained a 79% accuracy.

PUBLICATIONS

Shetty, J., Das, V. R., Mishra, M., Prasad, R., & Seth, S. (2023, February 14). *Classification of Brain Images for Identification of Tumors*. IEEE Xplore. <https://ieeexplore.ieee.org/document/10037548> Feb 2023

TECHNICAL SKILLS

Languages: Python, C/C++, CUDA C++, R, Java, Javascript, HTML5, CSS, MySQL, Node.js.

Softwares & Libraries: Linux, Kubernetes, Docker, Jenkins CI/CD, Git, Github, OpenMP, OpenMPI, GCP, LangGraph, LangChain, Apache Spark, Autogen, CrewAI, Keras, Pandas, numpy, **Tensorflow**, **PyTorch**, **scikit-learn**, Streamlit

Concepts: Algorithms, Data structures, Generative AI, Object Oriented Design, **Parallel Programming**, **Distributed Systems**, **Operating Systems**, **File Systems**, **Parallel Computing**, **Bash Scripting**

COMPETITIONS & ACHIEVEMENTS

HackPSU: 3rd Place; Penn State's largest student-run collegiate hackathon. **Sept 2023**

FormulaAI Hack: 2nd place; 3D Modeling Global Hackathon organized by Oracle RedBull Racing. **Feb 2022**

CodeStreet: Finalist and 2nd in Ideation; Cybersecurity in FinTech Hackathon organized by AmEx. **Oct 2021**