

# Cherukuri Gaurav Sushant

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## Objective

Master's student in Computational Modeling and Simulation with a strong foundation in Machine Learning, full-stack development, and performance-critical software. Seeking a Working Student (Werkstudent) position to contribute to AI/ML applications, Java enterprise systems, and scalable cloud solutions while continuing my studies. Experienced in Python-based ML development, Java programming, and full-stack web development.

## Skills

**Soft Skills:** Analytical thinking, independent working style, attention to detail, collaboration

**Programming & Systems:** Python (Advanced), C/C++ (Working Knowledge), Java, Linux, Bash, Git

**Machine Learning & AI:** PyTorch, TensorFlow, Keras, Scikit-Learn, Neural Networks, CNNs, NLP, Computer Vision

**Model Deployment & Systems:** ML inference pipelines, model optimization, ONNX (familiarity), performance-aware software design, heterogeneous compute workloads

**Cloud & Tooling:** AWS, Azure, Google Cloud, Docker, Kubernetes, Azure Data Factory, GitLab CI/CD

**Data & Databases:** MySQL, MSSQL, MongoDB, NoSQL, Statistics, Probability, Data Analysis

**Frameworks :** Flask, Node.js, React, Next.js

**Soft Skills:** Analytical thinking, independent working style, attention to detail

## Experience

### Role – Freelance Developer

Prepstreak, UK(Remote) | April 2025- June 10<sup>th</sup>, 2025

- Developed a cross-platform **mobile learning application** tailored for students in **grades 4–6**, promoting consistent study habits.
- Leveraged **React Native** and **Supabase** to create an interactive, user-friendly experience with personalized content delivery and real-time user tracking.
- Designed and implemented **gamification features** such as **streak-based rewards**, boosting engagement and long-term user retention.
- Focused on delivering a **curriculum-aligned**, dynamic interface optimized for young learners to encourage daily learning participation.

### AI Automation & Data Systems (Production Use):

- Designed and implemented an **automated PDF-to-SQL data ingestion pipeline** to convert raw SAT practice materials into **structured relational databases**.
- Developed Python-based data processing logic using **LangChain and LlamaIndex** to extract, clean, and normalize unstructured PDF content.
- Integrated **LLM-assisted semantic parsing** with validation logic to ensure schema consistency and data accuracy.
- Orchestrated the workflow using **n8n**, enabling automated, repeatable, and fault-tolerant execution.
- Delivered a production-ready system that significantly reduced **manual data entry** and enabled scalable, database-driven application features.

### Role - Intern

Xyenta, Hyderabad, India | 5th Jan 2025- June 30<sup>th</sup>, 2025

- Collaborated with cross-functional teams to design and implement **scalable, performance-aware software components**.
- Developed and deployed backend services supporting **compute-intensive workloads** using Python and cloud platforms.
- Migrated CPU-intensive tasks to **serverless architectures (AWS Lambda)**, reducing downtime by **10%** and operational cost by **40%**.
- Applied best practices in **CI/CD, version control, and system reliability**, aligning with production-grade software standards.

### Role - Trainee Intern

Xyenta, Hyderabad, India | 5th August 2024- 31st December 2024

- Performed SCD Type 1 & 2 transformations on MSSQL servers ensuring accurate and consistent data warehousing.

- Built scalable ETL pipelines using Azure Data Factory (ADF) to streamline data workflows and extract critical business insights.
- Utilized Apache Flink to process large-scale data in parallel, transforming it for advanced analytics and reporting.
- Worked cross-functionally to enhance data accessibility and pipeline performance.
- Used data analysis and forecasting to improve product planning decisions

#### **Role – Research Intern**

Precog@IIITD, Hyderabad, India | 02th February 2024 – 4th August 2024

- Developed and evaluated **NLP and ML models** with emphasis on **efficient inference and system integration**
- Built analytical dashboards and predictive pipelines to support **data-driven AI systems**.
- Worked in **Linux-based research environments**, supporting reproducible ML experimentation.
- Assisted in benchmarking, testing, and validating ML workflows for real-world deployment scenarios.

#### **Role - Infosec Intern**

Newmark, Hyderabad, India | 12th June 2023 – 4th August 2023

- Security & Performance: Automated incident response in Azure Sentinel; developed custom detection rules with KQL to improve proactive threat management.
- Metrics-Driven Analysis: Employed telemetry data to optimize firewall configurations and threat-hunting processes, ensuring a more stable and secure platform.

## **Education**

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**Master of Science (M.Sc.) – Computational Modeling and Simulation.**

October 2025- September 2027

Technische Universität Dresden, Germany

- Focus: Scientific Computing, High-Performance Computing, Applied Mathematics
- Interests: AI-driven modeling, edge intelligence, performance-critical systems

**Bachelor of Technology in Data Science and Artificial Intelligence**

August 2021- May 2025

ICFAI Foundation for Higher Education, Hyderabad

CGPA: 10.0

- Core Focus: Machine Learning, Cloud Computing, Computer Science Principles

## **PUBLICATIONS**

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- **Research Paper- Title:** Investigating Vulnerabilities of Information Solicitation Process in RPL-based IoT Networks
- **Research Chapter - Title:** Optimizing Networking Systems with Machine Learning Approach
- **Research Paper- Title:** A Comparative Analysis of Deep Learning Algorithms for Intrusion Detection in IoT

## **Projects**

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**QuickLeave**

Link: <https://quickeave-fst.vercel.app/>

Oct 2024 – Nov 2024 | Next.js, Firebase, Material UI

- Built an efficient leave management system used by HR teams, delivering a 25% reduction in approval times.
- Designed with customers in mind, focusing on intuitive workflows and responsive UI.
- Emphasized high-quality frontend and backend integration for seamless operation.

**Docuspace**

Link: <https://docu-team.web.app/>

Aug 2024 – Sep 2024 | Next.js, Flask, Ollama (LLM)

- Developed and deployed NLP-based OCR assistant using LLMs with Flask backend; applied deep learning for text extraction and semantic search.
- Designed an end-to-end **neural inference pipeline**, focusing on **low-latency backend execution and deployment efficiency**.
- Engineered an LLM-driven OCR document tool allowing customers to interact with content via chat.
- Prioritized high-quality code, responsive design, and low-latency responses.
- Collaborated with fellow engineers to maintain clean APIs and integrate with GenAI components.

## **AWARDS & ACCOLADES**

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- Credited as Winner of Smart Indian Hackathon-2024, in the Software domain (Internal Round)
- Received Merit-based scholarship for Academic Excellence at ICFAI - till Current Semester
- Selected for AI/ML Program at IIIT (Where the top 2 students from each institute were selected)
- Finalist in Smart India Hackathon 2024 (National Level)