Sukuru Sai Vineet

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Education

- **Birla Institute of Technology and Science, Pilani** — Goa, India
  B.Eng Computer Science; CGPA: 8.4/10 — *Aug 2018 - Aug 2022*

Experience

- **Entrepreneur First** — Bengaluru, Karnataka
  Entrepreneur in Residence — *July 2024 – Present*
  - Conducted 60+ user interviews to validate key problem statements in **MLOps** and **Code Search**.
  - Designed and developed **OmniGrep**, an AI-driven tool integrating codebases, technical documentation, and tickets to streamline developer queries, ranging from simple navigation (e.g., "Where is the auth service?") to complex decision-tracing questions (e.g., "Why was Gaia chosen over Firebase?").
  - Authored a detailed thesis documenting the research, user insights, and technical design for OmniGrep, supported by 67 user interviews and prototyping efforts. View Thesis.

- **Independent Software Consulting** — Bengaluru, Karnataka
  Self-employed — *Aug 2023 – June 2024*
  - Developed GitaGPT, a RAG-based chatbot powered by GPT-3 and HyDE, enabling interactive exploration of the Bhagavad Gita. GitaGPT attracted significant media coverage and 50k+ users.
  - Built Acharya, a personalized AI tutor capable of generating study plans and interactive Q&A for a range of topics from History to Physics.
  - Accelerated product development for pre-seed startups (Felvin AI, Mira Foundation) by leading AI engineering efforts, including **LLM fine-tuning** and orchestration.
  - Skills: Python, FastAPI, React.js, LLM Orchestration.

- **Google Inc** — Bengaluru, Karnataka
  Software Engineer — *July 2022 – July 2023*
  - Migrated and maintained **6 high-traffic API endpoints** critical to Google's infrastructure, improving system response times by 30% and reducing technical debt.
  - Optimized cloud resource management infrastructure, enhancing efficiency for key Google Cloud offerings using **Kubernetes**, **Protobuf (gRPC)**, and **Java**.

- **Info Edge Ventures** — Remote
  Investment Analyst Intern — *Aug 2021 – Feb 2022*
  - Conducted extensive research to identify high-potential investments in **Developer Tools** and **Blockchain**, presenting a comprehensive DevTools investment thesis for decision-making.

- **Walmart Global Tech India** — Remote
  Software Engineer Intern — *May 2021 – July 2021*
  - Built data integrity pipelines ensuring synchronization between store databases and master databases.
  - Developed a reporting tool to identify and resolve **pricing anomalies** during markdown periods using **PySpark** and **Google Looker**.

- **Google Summer of Code, GNOME Foundation** — Remote
  Software Engineer — *May 2020 – Aug 2020*
  - Achieved **6x performance improvement** for **Gitg**, GNOME's Git client, by designing a lazy-loaded tree view widget to optimize the file history plugin.
  - Refactored and tested existing code for better performance and maintainability using **Vala** and **GLib**.

- **Central Electronics Engineering Research Institute (CSIR-CEERI)** — Remote
  Research Intern — *Summer 2020*

- Developed a reinforcement learning-based system for automated tuning and parameter scheduling of **PID controllers** using **Python** and **PyTorch**.
- Implemented and validated findings from the research paper "Reinforcement Learning in Continuous Action Spaces" (H. van Hasselt, M. Weiring, 2007) by designing novel reward functions and exploration strategies.

- **Stratzy** — Bengaluru, Karnataka
  Founding Backend Engineer — *May 2019 – Jan 2020*
  - Built backend infrastructure to execute medium-frequency quantitative trading strategies using **Python**, **numpy**, and **pandas**.
  - Developed high-speed backtesting software in **Cython** for analyzing quantitative trading strategies. Processed and cleaned market data from **Zerodha APIs**.

Achievements and Awards

- **Google Code-in 2015 (Grand Prize Winner):** Achieved **Top 28 globally** for contributions to *Apertium*. Invited to **Google HQ, Mountain View, California**.
- **Google Code-in 2013/2014 (Finalist):** Recognized as a Finalist for impactful open-source contributions to *Sugar Labs* and *Apertium*.
- **Google Code2Learn 2014 (Winner):** Selected among **Top 3 winners** in the 9th-10th grade category. Developed a physics simulator application. View Code — Video Demo

Projects

- **Acharya: Personalised AI Tutor (2023)** Developed a one-on-one AI tutoring chatbot that generates customized study plans and Q&A sessions for subjects across school curricula.
- **Gita GPT (2023)** Built a Retrieval-Augmented-Generation (RAG) chatbot enabling interactive conversations with the Bhagavad Gita. Gained significant media coverage and praise for enhancing scripture accessibility using GPT-3 and HyDE methods.
- **Pacman AI with Reinforcement Learning (2021)** Implemented a Deep Q-Network (DQN) achieving superhuman performance in Pacman through pixel-based training and real-time decision-making.
- **Monte Carlo Algorithm Analyzer (2020)** Designed an automated tool to analyze algorithm performance using Monte Carlo methods. Applied it to evaluate a COVID-19 binary search testing strategy; detailed findings published here.

Scholastic Achievements

- **Published** final-year thesis, "A Data-Centric Approach for Analyzing Large-Scale Deep Learning Applications", at IIT Kharagpur's *International Conference for Distributed Computing and Networking (ICDCN)*, 2023.
- Appointed **Teaching Assistant** for *Data Structures and Algorithms*, responsible for creating teaching materials and conducting tutorials for a class of 400+ students across disciplines.
- Awarded **Merit Scholarship** (Top 3%) in Semester 1-1 onwards and **Merit-cum-Need Scholarship** for Semester 3-1 onward.
- Secured **All India Rank 3083** among 2+ lakh candidates in *JEE (Advanced)*, 2018.
- Secured **All India Rank 4308** among 1+ million candidates in *JEE (Main)*, 2018.
- **Qualified Zonal Computing Olympiad** (2017) and appeared for the *Indian National Olympiad in Informatics*, 2017.