Vedanta P. Somnathe

vpsomnathe@crimson.ua.edu | thevedanta.me | (659) 228-3497 | linkedin/in/thevedanta | github/thevedanta

Education

The University of Alabama, BS in Computer Science (Mathematics minor) | **GPA:** 4.00 — Aug 2028
- Honors College, Blount Scholar, Research Apprenticeship Program

Experience

JustSync.ai | *ML Engineering Intern* — Mar 2024 – Aug 2024
- Fine-tuned ML models & scraping from 2500+ medical articles & research papers for data-retrieval
- Indexed data into FAISS vector store at minimum cost and deployed on Google Cloud Engine
- Created a keyword-based recommendation engine using LangChain, improving user interaction by 20%

BrdsAI | *Software Engineer* — Oct 2023 – Mar 2024
- Built an EHR platform linked to Epic Systems to store and query documents, patient interactions, and notes
- Increased data-types from 3 to 16 by engineering a scalable multi-document engine in React

Indian Institute of Management, Indore | *Lead Developer* — Sept 2022 – Jan 2023
- Directed a team of 4 and developed a platform used by 2000+ Graduate students as a campus-wide application
- Simplified infrastructure by setting up cron jobs for notifications using GCP, including specific event pushes
- Eliminated 2 extra screens by enforcing OAuth on university email using a custom sheet-based parser

Research

Cherenkov Telescope Array | *UC Santa Cruz* — Jun 2023 – Aug 2023
- Optimized 3 pixel-reduction algorithms in the *CTAPipe* library using SciPy to 98% anomalies detected
- Developed a logarithmic metric to evaluate cleaning efficiency in $\log(Size)$ vs. $\log(Energy)$

WRF Chem visualization engine | *Bulgarian Academy of Sciences* — Aug 2022 – Nov 2023
- Published and Presented paper on performance optimization of weather forecasting models with image chunking
- Optimized average latency to 0.02 seconds FCP on an SSR Framework using a dummy-API approach; DOI Link

Projects

Storm | *Exun Intl. hackathon* • *Runners-up* — Link | GitHub
- Led a team of 3 to build a graphical brainstorming app with collaborative live cursors using P2P Sockets
- Summaries and Conflict resolution using MistralAI with a sliding context window and few-shot sampling

Find-a-Time | *Passion project* — Link | GitHub
- A live-time calendar for checking teams' availability in multiple timezones using Firebase and Moment
- Adaptable to all forms of meeting types and durations with serveless inrastructure and Material UI

StackSearch | *Pathways Natl. Hackathon* • *Runners-up* — GitHub
- Led a team of 3 to build a VS-Code Extension to help with StackOverflow search within editor
- Scroll and Selection implemented with Hot-keys and code extraction using a custom parser

Skills

Languages: TypeScript, Python, C++, Go, SQL, XML/CSS, JavaScript, C, Bash, Liquid, Lua, Dart

Technologies: React, NextJS, Remix, FastAPI, ExpressJS, tRPC, LangChain, Docker, Kubernetes

Tools BeautifulSoup, PyTorch, Pandas, SciPy, NumPy, FAISS, Google Cloud, JsonWebToken, NMAP

Databases: MongoDB, PostgreSQL, Firebase, Supabase, MySQL