ANANT BALACHANDRAN VISHWAKARMA

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EDUCATION

University of California, Davis, United States *Master of Science, Computer Science* Expected Jun 2025
SRM Institute of Science and Technology, Chennai (Madras), India *Grade: **9.37** out of 10* Jul 2019 - May 2023
Bachelor of Technology, Computer Science and Engineering
GRE Score : 323/340

SKILLS

Python, Scikit Learn, Pandas, NumPy, Matplotlib, Data Analytics, Data Science, Machine Learning, SQL, R Programming, C++, HTML, CSS, Leadership, Team Management, Public Speaking

WORK EXPERIENCE

FOUNDING ENGINEER – MLPal.ai Jun 2024 - Current

- Developed Jarvis, an AI-driven cloud infrastructure tool integrated with AWS (EC2, S3) to automate and optimize AI/ML workload management.
- Key contributor to the architecture of ML Pal's AI ecosystem, automating model selection, training, and inference deployment using advanced machine learning frameworks.
- Directing business strategy, including SaaS pricing, customer segmentation, and go-to-market planning, working on growing MLPal
- Leading investor pitches and fundraising, emphasizing the company's value in AI democratization through conversational interfaces for AI management.

AI ENGINEER - LATEETUD Jun 2024 – Sep 2024

- Developed a RAG-based chatbot for healthcare patient data utilizing Langchain, vector stores, Azure APIs, and SQL.
- Engineered backend CRUD operations for the product using Flask, SQL, and Postman, seamlessly integrating with the RAG system. Showcased proficiency in RESTful API development, backend architecture, and data management.
- Ensured efficient data handling and retrieval to support accurate and responsive chatbot interactions.
- Collaborated with cross-functional teams to enhance the product's functionality and user experience.

ML GRADUATE RESEARCHER – UNIVERSITY OF CALIFORNIA, DAVIS Sep 2023 - Current

Contributed to the LLM Accelerator project, part of the Startup Club initiative

- Analyzed distributed training algorithms such as FSDP to understand their communication patterns and usage of collectives like NCCL (all reduce, scatter gather).
- Visualized data flow within clusters during distributed training to gain insights into communication patterns.
- Identified LLM tasks amenable to offloading to Smart NICs for accelerated inference, addressing network bottlenecks.
- Explored the potential of AI NICs and In-Network Compute to optimize collective operations, thereby improving training efficiency and achieving superior results.

TEACHING ASSISTANT - UNIVERSITY OF CALIFORNIA, DAVIS Sep 2023 - Current

*Teaching assistant for **Introduction to Entrepreneurship** class. Demonstrated leadership and project management skills overseeing the successful completion of multiple group projects.*

- Effectively managed 7 teams of 4 undergraduate students each, providing guidance and support throughout the project lifecycle.
- Organized and facilitated group meetings, ensuring on-task progress and addressing any challenges promptly.
- Developed and implemented a comprehensive project management plan, including timelines, deliverables, and evaluation criteria.
- Successfully guided each team through the development of a business plan, culminating in presentations to the class.

KEY PROJECTS

AN ANALYTICAL MODEL TO PREDICT PARAMETERS LEADING TO DROUGHT CONDITIONS Jan 2023 - Jun 2023

- Directed a team to develop a predictive model for drought parameters with a 3-month prediction window using local data for the city of Chennai, India.
- Scraped, cleaned and preprocessed local data. Performed correlation analysis with heatmaps and tested for data feature stationarity.
- Implemented the ARIMA technique to find dependencies using historical time series data for pressure, shortwave irradiation and relative humidity – key contributors to drought conditions
- Achieved a benchmark prediction accuracy with error rates of 0.37%, 7.63% and 3.96% for the three parameters

GLOBAL STUDY STUDENT - UNIVERSITY OF CALIFORNIA, DAVIS Jan 2022 - Jul 2022.

- Led a 4-person team in crafting a startup deck for 'SALESFORCE' in an immersion environment, employing core entrepreneurship principles. Applied strategic thinking and entrepreneurship skills to develop a compelling pitch deck. Engaged in numerous entrepreneurship workshops, demonstrating a commitment to continuous learning and entrepreneurial development.
- Applied Statistical Analysis techniques using R to address real-world challenges such as COVID Genome Sequencing, Population estimations, and Correlation studies, showcasing proficiency in statistical analysis and problem-solving.
- Collaborated within a 10-member team on a series of mini projects for management at leading technology firms, demonstrating strong teamwork, project management skills, and adaptability in diverse project environments.

EXTRACURRICULARS

- Confidently addressed an audience of 3000, effectively communicating key messages and engaging listeners through storytelling and interactive elements at TP Ganeshan Auditorium. (Second Largest Auditorium in Asia).