Manohar Vellala

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GitHub Available from *May 2024 - May 2025*

Education

Old Dominion University **Expected May 2025**
Master of Science in Computer Science; GPA: 3.8 *Norfolk, VA*
Relevant Coursework: *Web Programming (JavaScript, React, Node.JS), Data Visualization (Tableau, Seaborn), NLP (Sentiment Analysis,Virtual Assistants)*

B.N.M Institute Of Technology **Jul 2019 – Jun 2023**
Bachelor of Technology in Computer Science And Engineering; *Bangalore, India*

Skills

Languages: C , C++, Python, JavaScript, Java , HTML, CSS,PHP, SQL
Technical skills: Data Analysis, Data Visualization, Full Stack Development
Frameworks: React, Spring-Boot, Django, Flask, Angular, Node.JS, Numpy, Pandas, OpenRefine
Tools: Microsoft Excel, Powerpoint, GCP, Tableau, Jira, Slack, Agile Methodology, Github
Databases: SQL, Postgres, AWS (Amazon RDS, DynamoDB), Neo4j, MongoDB

Soft skills: Data-driven, Communication, Strategic Thinker, Team Work, Collaborative
Certification: AlgoExpert.io (Data Structures And Algorithms, Time And Space Complexity Analysis)

Experience

Old Dominion University **Norfolk, Virginia,US**
Graduate Assistant - Software Developer *Aug. 2023 - Present*

- Revamped Map Communications Inc. login portal using **AWS Lambda**, enabling over 100K+ clients to securely access the portal. Utilized **OAuth 2.0** and **Twilio SMS API** for sending OTPs.
- Designed **CI/CD pipelines** using **Jenkins** to automate building, testing, and deployment of **Django, React, MongoDB** based virtual receptionist system for Map Communications Inc.
- Achieved a 20% client engagement increase through Google Cloud **Conversation AI** and **Voice-AI** integration. This resulted in the creation of lifelike voices to amplify natural and engaging interactions with the clients.
- Engineered the VSorts™ cloud-based **SaaS** web app with cross-functional team (Product, Sales, Engineer, Support, Designers) of 5. Constructed **resuabel components** using **Material UI, Tailwind CSS.**
- Performed unit testing for Restful API using **Chai** and **Mocha** framework.

ThoughtClan Technologies PVT LTD **Bangalore, India**
Software Engineer *Feb. 2023 - Jun. 2023*

- Improved internal access control turnaround time and security by developing a module using Java **Spring-Boot**, integrated with **OAuth 2.0** for authentication and authorization, automating access control.
- Increased productivity by reducing the time and effort required to discover and access data, by deploying a data discovery tool **Amundsen** to a **Kubernetes** (Amazon EKS) cluster, leading to more informed decision-making.

Indian Space Research Organisation **Bangalore, India**
Software Intern *Aug. 2021 - Oct. 2021*

- Designed, developed, and maintained the **Flask-based** Electronic Beam Software web application for I.S.R.O
- Introduced a Machine Learning algorithm (Linear Regression) by performing **Regression Analysis** on variables fto predict the beam and focus currents utilizing **TensorFlow, Scikit-learn** for model development and deployment.
- Automated plotting currents with machine parameters using **Plotly**, detecting anomalies in the welding process, saving 120+ engineer hours.

Projects

CS120.AI

- Innovated CS120.AI an **Angular, Django** based chatbot designed for courses at Old Dominion University.
- Harnessed the power of the **Transformers** library from **Hugging Face** to fine-tune the **BERT** model and developed **APIs** to seamlessly integrate it into CS120.AI serving as a **Large Language Model (LLM)**.
- This integration empowers CS120.AI to excel in tasks such as **Sentiment Analysis, Question Answering, Text Predictions, Text Generation**. Alleviated 30+ Teaching Assistant and Professor hours per semester.

Graph Visualizer

- Developed Graph Visualizer with **Node.JS** to comprehensively visualise **Graph Algorithms**, including SWARM, Dijkstra's, BFS, and DFS. The Website is deployed live at: Graph Visualizer.

Awards

Best Research Intern, Hands On Lab, Old Dominion University

- Achieved this recognition in one of the university's top five research labs for building an **SVM-based ML Model** using accelerometer data sourced from Fitbit Versa 2 to detect sudden movements in agitated patients with 95% accuracy, contributing to increased safety of patients.
- Employed **Apache Kafka** to handle large volumes of device data in a scalable and fault-tolerant manner.