PAVAN KUMAR ETTA

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EDUCATION

University of Massachusetts Dartmouth — *M.S. in Data Science*
North Dartmouth, MA | Sep 2024 – Dec 2025
Coursework: Algorithms & Data Structures, Machine Learning, Distributed Systems, Software Engineering,
Indian Institute of Information Technology — *B.Tech in Electronics & Communication Engineering*
Chittoor, India | Aug 2017 – May 2021

SKILLS

Programming: Python, JavaScript, Typescript, C/C++, Java, Go, MySQL, MongoDB, PostgreSQL, MSSQL, DynamoDB
Frameworks: Numpy, Pandas, SkLearn, PySpark, Hadoop, NLTK, OpenCV, PyTorch, Tensorflow, ChatGPT, Redis, Agile
Software: HTML/SCSS, Node.js, React.js, React Native, Angular.js, Next.js, Vue.js, Django, GraphQL, Flask, Redux, REST
Courses: Data Structures and Algorithms, Operating Systems, Theory of Database, Computer Networks, Cyber Security
Others: AWS, Docker, Kubernetes, Gitlab CI/CD, HTTP, TCP/IP, Linux, AJAX, Bash, Kafka, JIRA, jQuery, Jest, JSON

PROFESSIONAL EXPERIENCE

Rhenix Lifesciences LLP | **Senior Software Engineer** **Jul ’2021 - Aug ‘2024**

- Led a team to automate health data collection from smart wearables (Fitbit, Oura, etc.) using **OAuth 2.0** and Open APIs, capturing data at **5-second** intervals for in-depth research on heart rate patterns. [GITHUB]
- Developed a customer-focused app with features like **appointment booking**, **Google Maps integration**, and order tracking. Leveraged **AWS** and Flutter for secure, seamless operations and real-time notifications.
- Implemented **GitLab CI/CD** pipelines to automate the deployment of containerized modules on AWS Elastic **Kubernetes** Service (**EKS**), slashing deployment times by **80%**.
- Designed dynamic dashboards using **Power BI**, **Tableau**, and **SQL** to optimize healthcare access, enabling real-time analysis and booking of oncology/neurology appointments by zip code
- Deployed processes to Extract, Transform, and Load (ETL) using **Python** more than a million transaction records from the mainframe to the **IRIS DB** with **AWS** glue jobs in less than 10 seconds.
- Optimized **MySQL** schema with partitioning and indexing for efficient data retrieval. Integrated **Redis** caching, reducing database load and improving query response time by **70%**.
- Developed React and Angular web apps with **Typescript** to present medical research data. Implemented features for data querying and visualization using **Plotly.js** and backend powered by **Django** and **Python**.

Solank Power Systems | **Software Engineer** **Jan ’2021 - Apr ‘2021**

- Developed an **IoT**-based condition monitoring system using **ESP32** to transmit sensor data to the cloud for real-time processing and alerts. Enabled automated machine shutdowns based on sensor thresholds.
- Developed a data acquisition system with **MEMS**-based accelerometers and **ESP32**, using **Matlab** for FFT to predict machine displacement and velocity. Enabled proactive maintenance and fault detection.
- Achieved **93%** accuracy in forest fire prediction using **TinyML** models with real-time data analysis, leveraging Matlab, Jupyter Notebook, and Edge Impulse.

PROJECTS

House Price Prediction **(AWS, Django, Python)**

- Utilized AWS Sagemaker, EC2, EBS, Lambda, Lex, and API Gateway to develop and deploy a Django app. Built a Lex chatbot for data collection and a Sagemaker model for price prediction with 90% accuracy.

Android & IOS Application: Lekhone App [GITHUB] **(Flutter, Dart, AWS)**

- Developed a customer-focused app with appointment booking, Google Maps integration, and secure authentication. Implemented using AWS (EC2, DynamoDB, SES, SNS), REST APIs, and Flutter.

Water Quality Analysis **(NetCDF, Tableau, PyTorch, PySpark, Hadoop)**

- Processed 30GB of water distribution data to identify trends and patterns. Designed an LSTM forecasting model with an MAE of 1.45 and visualized results using Tableau.

Daily Sports and Activities Classifier [GITHUB] **(Matlab, Python, Tensor Flow)**

- Built a sensor-based activity classifier using Random Forest achieving 97% accuracy for overall performance.