Chaitanya Yeole

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EDUCATION

University at Buffalo, The State University of New York — Dec 2024
Master of Science in Computer Science and Engineering — **GPA: 3.875/4.0**
Coursework: Deep Learning, Analysis of Algorithms, Data Intensive Computing, Query Languages

MIT World Peace University — Oct 2021
Bachelor of Technology in Electronics and Communication Engineering — **GPA: 8.66/10.0**
Coursework: Data Science, Fuzzy Logic and Graph theory, NLP, Neural Networks, Pattern Recognition

EXPERIENCE

Software Development Intern, SUNY Research Foundation *(Python, React, SQL)* — Sep 2023 – present
- Full Stack developer for REDfly, focusing on upgrade of the website's UI and backend to improve functionality and user experience.
- Migrated legacy PHP framework to a modern stack and scalable architecture boosting speed by 45% and improving engagement.
- Developed data export feature in diverse genomic data formats, reducing download speeds by 82% through multi-threading.
- Implemented GraphQL APIs for more efficient data fetching and leveraged SQLAlchemy for database operations, accelerating backend processes and data retrieval efficiency by 32%.

Software Development Engineer II, Statiq *(Python, SQL, MongoDB, Redis, AWS)* — Jan 2021 – Jun 2023
- Engineered OCPI HUB for CPOs and eMSPs, enabling EV owners to access any charger through one app for global charging ease.
- Remodeled the WebSockets server, transitioning to an ASGI model with FastAPI on Uvicorn, reducing server load by 88%.
- Upgraded ASGI framework allowed a single kubernetes pod to support 54 chargers instead of 2 increasing connectivity by 2600%.
- Integrated Sentry API and standardized log format, increasing the internal team's issue resolution and debugging efficiency by 38%.
- Established direct link between mobile app (HTTP) and WebSockets server via AWS SQS, reducing administrative overhead.
- Incorporated scalable, asynchronous payment APIs using Python, contributing to a 21% increase in overall transaction rate.
- Collaborated with the CTO to formulate and prioritize technical strategies, contributing to successful Series A funding of $25.7M.
- Deployed an interactive dashboard for notifications with AWS lambda and Python for marketing team, improving client interactions.
- Led agile development of a scalable OCPP server with WebSockets and FastAPI, achieving 99.8% uptime for >5000 EV stations.
- Designed and constructed a MySQL database architecture to integrate the Charging Station Management System (CSMS), MobileApp, and WebSockets server.

PROJECTS

Health Monitoring Dashboard
- Developed a central hub with WebSockets and AWS IoT Core to aggregate data stream from 78 medical equipment simultaneously.
- The dashboard in React and Python displayed patients health metrics allowing the monitoring of more than 50 patient's at once.

Mental Health Analysis using Handwriting Images
- Analyzed 7 handwriting patterns using 4 SVM classifiers to identify specific mental health states with over 98.58% accuracy.
- Designed a pre-processing pipeline using Adobe Photoshop and OpenCV to enhance and analyze handwriting images of 657 writers.
- Built a ReactJS and Django website for doctors to upload and analyze handwritten samples having access to mental health insights.

IMDb Score Prediction using LSTM and Random Forest
- Constructed an ensemble model system with PyTorch to identify high-potential streaming content with an accuracy exceeding 95%.
- Website implemented in ReactJS and Flask utilizing an ensemble model for user-uploaded movie details for predicting IMDb score.

Virtual Library Management System
- Built a platform in ReactJS and FastAPI for library record management and auto-complete search of 10,000 books within 476ms.
- Incorporated Docker to simplify and streamline deployment process ensuring application delivery across multiple environments.

TECHNICAL SKILLS

Languages: Python, Javascript, C++, Embedded C, SQL, HTML/CSS
Frameworks: GraphQL, FastAPI, React, WebSockets, Node.js, Django
ML Libraries: PyTorch, NumPy, Pandas, CUDA, Scikit-Learn
Developer Tools: Amazon Web Services (AWS), Git, MySQL, MongoDB, Redis, Elasticsearch, Postman, Google App Engine, CI/CD

RESEARCH EXPERIENCE

[1] Chaitanya Yeole, et al. (Jun 2021) Deep Learning Techniques for Human Activity Recognition, IJISRT

AWARDS

National Robocon 2020, ABU Robocon: All India Rank 1 — Jun 2020
- Engineered omni-directional robots with an ARM Cortex M4 and advanced sensor integration, achieving tasks within 90 seconds.

National SAVe 2019, NIOT: All India Rank 3 — Jan 2019
- Crafted AUV real-time image-based navigation using NVIDIA Jetson TX1 and PyKinect via ROS, completing tasks in 150 seconds.

National Robocon 2018, ABU Robocon: All India Rank 2 — Mar 2018
- Devised a coordinate-mapping equation using rotary encoders for precise autonomous navigation with less than 4.2% error margin.