MOHITH MANOHAR

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EDUCATION

Columbia University, *M.S. in Computer Science* New York, NY; May 2022
Ramaiah Institute of Technology, *B.E. in Information Science & Engg* Bangalore, India; Sep 2020

RELEVANT WORK EXPERIENCE

Simply Fixable Inc. New York, NY
Founding Software Engineer - AI/Machine Learning and Backend/Frontend May 2023 - Dec 2023

- Built Open AI LLM - GPT-3.5 based LangChain powered Chatbot with Next.js using >15 Custom Tools & Agents for automated appointment scheduling & Lead generation of customers increasing customer traffic by 30%
- Enhanced the accuracy of the Large Language model by fine tuning it with HuggingFace Transformers & integrated with 3+ Retrieval Augmented Generation chains improving user output by 40%
- Programmed Vector embeddings based RAG chains using Pinecone database and AWS S3 improving accuracy 30%
- Built and setup the AWS Architecture, developed the Database initial schema and developed relevant APIs documenting using Swagger & updating using a CI/CD pipeline to AWS RDS(SQL), S3 improving efficiency 20%
- Developed and deployed the AI chatbot using AWS EC2 automating it using a PM2 CI/CD pipeline and Nginx web server. Built the internal Javascript/Typescript REST APIs, integrated with the Pinecone vector database

CoreStack.io New York, NY
Software Engineer – Machine Learning and Full Stack Jul 2022 - Dec 2022

- Developed a custom Spacy Machine learning model for a RASA powered AI Chatbot integrated with external & internal APIs to give custom set of suggestions on input improving user efficiency with 90% accurate keywords
- Collaborated with a team of Machine learning and Software engineers to build the Machine learning model powered Custom Chatbot improving user experience and customer retention rate by 20%
- Developed a RASA powered AI chatbot using React.js with HTML5 ,CSS3 and TypeScript integrated with custom external API functions and internal RESTful APIs to generate cloud costs, forecasts filtered based on the user input
- Integrated custom Spacy Machine learning Model and ETL pipeline into chatbot to give a set of relevant keyword suggestions seamlessly improving user traffic by 30% using Linux serverless architecture

Columbia Build Lab, JoyShare New York, NY
Software Engineer - Backend/Frontend May 2021 - May 2022

- Developed a Cryptocurrency React.js web3 payments app with AWS CloudWatch, DynamoDB and PostgreSQL with MongoDB Atlas Database to improve latency of >10 custom built integrated JavaScript API real-time requests
- Designed Figma wireframes & constructed Java web app using HTML & CSS powered with MongoDB Atlas, AWS architecture & GitHub based collaboration and CI/CD pipeline improving customer engagement by 10%

Allure Security Inc. New York, NY
Backend/Frontend Engineer - Security Jul 2021 - Sep 2021

- Developed Scam detection Java Android App with a team of engg integrated with 1K+ real-time HTTPS API req

WIT Legal LLC New York, NY
Software Engineer - Machine Learning Intern Jun 2021 - Feb 2022

- Implemented OpenAI API based custom Machine Learning model using Python on Big Data Resume Database (>10,000 records) for Keyword Search Optimization & Generation with a team of Engineers achieving 80% acc
- Built a Custom Machine learning pipeline with Natural Language Processing of the 10000+ Resumes and a keyword clustering Machine learning model to increasing 50% Legal work efficiency with an enhanced Database search algorithm

Columbia University   New York, NY
Software engineer - Machine Learning Research   Jan 2021 - Jul 2021

- Created Machine Learning & Silhouette algorithms on 10000+ SSL encrypted pcap files to classify video streams in python achieving 70% efficiency in detection of video streaming packets
- Enhanced the performance of the Machine learning model by 20% using hyper parameter tuning of the relevant network packet features collected using Automated crone job Python scripts and data processing pipelines
- Constructed JavaScript ES6, HTML5 & CSS3 Chrome browser extension integrated with Google Cloud Platform and internal Machine learning REST API to prevent financial data phishing on >100 domain websites
- Detected malicious payloads from websites, generated & sent fake data using JavaScript RESTful API server requests

Cognizant Technology Solutions   Bangalore, India
Software Engineer - Backend & Application Security   Jan 2020 - Jan 2021

- Examined and reviewed Big Data for Governance, Risk & Compliance utilizing RSA Archer Suite & automation using python scripts deployed on containerized(Docker) business web applications securing 10000+ IAM roles
- Deployed Okta's Java Software Development Kit, CyberArk - YAML & SailPoint IdentityIQ - JavaScript for privileged Identity and Access Management in cloud applications enhancing security by 80%

PROJECTS AND RESEARCH

Student Loan Eligibility Rating using Machine learning/Deep learning   Mar 2023 - May 2023

- Created a Hybrid machine learning & Deep learning algorithm to forecast student loan ratings on scale of 10 using aggregated student financial data >100k records increasing 80% chances of students getting approved for a loan
- Enhanced the Machine learning model performance using 100GB of additional historical aggregated student data and performed hyper parameter tuning for 100+ financial features eliminating the non-essential ones
- Developed React Native with Redux powered web application using Material UI with Secure payment portal using Square payments REST API integrating FireBase Cloud Database using SQL increasing user traffic by 30%
- Built the Local Backend architecture with the scalability to AWS improving latency and throughput of API requests and CI/CD pipeline by 20% to handle computation of the Machine Learning Model infrastructure

IDS - Intrusion Detection Systems using Machine Learning   Jan 2021 - May 2021

- Compared 2 Systems' Security through active auth. by developing a test-driven Machine Learning model in python
- Performed behavior & sentimental analysis using Machine learning on 30 day email models to infer Social Network behavior patterns enhancing security measures of the test platform by 30%

Prevention of Economic/Finance Fraud using NFC & NIDS   Sep 2019 - Jun 2020

- Investigated UNSW NB15 Dataset to detect malicious credit card network txn. using Machine Learning; 98% efficient

TECHNICAL SKILLS

- Languages: Python, Swift, Java & J2EE, C , C++, JavaScript, TypeScript, Angular, JSON, MySQL, PL/SQL, PHP, HTML, CSS
- Tools: AWS, SciKit-Learn,Keras, TensorFlow, LangChain, VSCode, Pinecone, Apache Spark, Pytorch, Generative AI, GCloud, Firebase, GitHub, Ionic, React.js, Angular.js, Flask, Android Studio, XCode, TensorFlow, Figm