Kaarthik Senthil Kumar

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EDUCATION:

Stevens Institute of Technology | Hoboken, NJ
Master of Science in Computer Science | GPA: 3.94/4 **Expected May 2024**
Relevant courses: Mathematical Foundation of Machine Learning, Data Structures and Algorithms, Fundamentals of Computing in Python

Rajalakshmi Engineering College | Chennai, Tamil Nadu
BE in Computer Science and Engineering | CGPA: 3.47/4 **June 2022**
Relevant courses: Data Structures, DBMS, Data Warehousing and Data Mining, Artificial Intelligence, Data Analytics, Cloud Computing

SKILLS AND CERTIFICATIONS:

Software: Unity, Microsoft Suite (Word, Excel, PowerPoint)
Programming: Python, Java, C, C++, JavaScript, HTML, CSS, SQL, C#
DBMS: MySQL, Mongo DB, SQLite, Postgres
Frameworks, Tools & Technologies: Langchain, LLM, AWS, Firebase, MySQL, Arduino, Raspberry pi, React, Django, Tableau
Certifications: 'Machine Learning A-Z™: Hands-On Python & R' in Udemy, '100 Days of Code: The Complete Python Pro Boot camp for 2022' in Udemy, '[NEW] Ultimate AWS Certified Cloud Practitioner - 2021' in Udemy

EXPERIENCE:

Synechron Inc | New York, USA **June 2023 - Aug 2023**
Data Science Internship
- Explored and worked with various Large language models such as GPT, Vicuna, Llama, WizardLM, Falcon
- Built a Q and A system on SEC filings using Langchain agents and tools powered by LLM
- Developed a function to GAN function to increase the OCR accuracy and researched on Real-ESR GAN and EDSR GAN models

Eamvey Technologies | Tamil Nadu, India **Jan 2021 - Mar 2021**
Machine Learning Internship
- Designed 2 models to anticipate sales on a 'Big billion day' dataset in Python, classifying demand as high or low based on the amount of purchase using Linear regression and Perceptron model
- Applied Python libraries and functions (Scikit-learn, Pandas, NumPy, Seaborn), ML models (Decision Tree, SVM, Perceptron), classification reports, confusion matrices to train and test with various models
- Deployed the Machine Learning model into AWS SageMaker

PROJECTS:

National Identity Card Security System with Real-time Facial Recognition **Feb 2022 - May 2022**
- Programmed an application in Tkinter framework to enhance user identity authentication collaborating in a team of two
- Developed a deep learning model of accuracy 92.3 using Convolutional Neural Network (CNN) and Haar-Cascade
- Surpassed offline verification issue by implementing the project as Software as a Service (SaaS) and hosting it in Firebase
- Received highest grade among the participated 100 teams in the university

IOT-Based Driver Drowsiness Detection System **Aug 2021 - Nov 2021**
- Headed a team of three and built a real-time driver's drowsiness alert system on Raspberry pi platform
- Formulated a Machine Learning algorithm with Eye-Aspect Ratio (EAR) and Frontal Haar (Open CV) detecting closure of eyes
- Modeled a system loading the ML algorithm in the IOT device and hosted in AWS EC2

A Full-Stack E-commerce Website **Sep 2020 - Nov 2020**
- Conceptualized the need for a medium to buy and sell goods from various vendors and customers and built a full stack website with Django as backend and REACT as front end
- Wrote API as an intermediary to connect back-end and front-end aggregating information from both sides
- Created a Mongo DB to handle all unstructured data and augmented a payment gateway to expedite the orders

ACTIVITIES:

- Published a paper on computer vision, a comparison study on SR GAN models co-authored by industry experts