KARTTHIKEYAN NAGASUBRAMANIAM

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EDUCATION

Amrita Vishwa Vidhyapeetam — Bangalore, India
B. Tech Computer Science and Engineering — *Aug 2021 – Present*
Coursework: Data Structures, Object Oriented Programming, Design and Algorithm Analysis, Machine Learning

Geetanjali Olympiad School — Bangalore, India
PCMC — *Aug 2019 – Jun 2021*
Coursework: Physics, Chemistry, Mathematics, Computer Science, English

EXPERIENCE

Integra Micro Software — Bangalore, India
Technical Intern — *June 2023 – July 2023*
- Worked as a Technical Intern at Integra, gaining hands-on experience in **React.js** and **Node.js** while contributing to a significant company project.
- Optimized the routing technique by **70%** by implementing the Routes function in React, which improved the overall smoothness and speed of the webpage.
- Implemented asynchronous data handling in a real-time grading system using React Hooks and Node.js, reducing server response delay by up to **45%** and improving data retrieval speed by **2x**.
- Improved code comprehension and reduced debugging time by **30%**, enabling faster feature deployment.

PROJECTS

Cold Start Movie Recommendation System | *Python, Data Science, Machine Learning, Algorithms*
- Designed a Machine Learning and Recommendation Model utilizing **Content-based, Hybrid, and Collaborative filtering** techniques.
- Fine-tuned the dataset through preprocessing, achieving a **70%** increase in the accuracy of the ML model.
- Created a **Comparative matrix** to evaluate the performance of different algorithms under identical conditions, enabling fair and precise assessments.

Low-Cost Wi-Fi and Drone Jammer | *Aurdino Nano, Aurdino IDE, Computer Hardware Essestial, Micro-Controller*
- Developed a jamming model using the **NRF24L01 module**, effectively targeting the **2.4GHz** frequency range.
- Built and implemented the model with an Arduino Nano and IDE, achieving a highly functional, cost-effective solution that saves up to 60% compared to current market alternatives
- Incorporated the NRF24L01 module to send approximately **1,000** requests per second, maximizing jamming efficiency and performance

Unity Chat | *ReactJS, Flask REST API, Firebase, AWS*
- Innovated a **Full-stack** unified chat platform tailored for employees of an underprivileged enterprise.
- Leveraged Firebase's NoSQL database for efficient, real-time data handling, resulting in a **2x** improvement in communication speed.
- Streamlined deployment processes with Firestore, achieving an **80%** improvement in deployment speed

TECHNICAL SKILLS

Languages: Python, JavaScript, MATLAB, C/C++, Java, HTML, CSS
Frameworks: Django, ReactJS, NodeJS
Databases & Platforms: SQL, Spark, Hadoop, MongoDB, AWS, Linux/Unix
Certifications: Web Development, Data Science, Full Stack Web Development

ACHIEVEMENTS

- Presented a research paper titled 'Cold Start Movie Recommendation' at the **15th International IEEE Conference on Computing,**, contributing valuable insights to enhance recommendation systems.

- Presented groundbreaking findings on "Low-Cost Wi-Fi and Drone Jammer" at the **5th International Conference on Smart Electronics and Communication**, driving discussions among experts about advancements in electronic warfare strategies.