THOMAS JOHN

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Summary

As an undergraduate in Computer Science with over an year of Hands-on experience in the software industry, I actively participate in the industry through AI, Machine Learning, and Full Stack Development. I build scalable and secure applications using Python, Flask, React, FastAPI, and even Solidity. My academic projects showcase my ability to lead projects that merge AI with advanced web technologies, such as VeinChain,a blockchain-based biometric authentication system, and a GUI for real-time detection of live emojis using CNNs. My academic achievements, leadership positions, and participation at the enterprise level highlight my skills in problem solving and collaboration, allowing me to leverage innovation and achieve results.

Experience

Corestrat Labs   **February 2025 – Present**

Software Development Intern

- **Developed and maintained scalable .NET and Flask APIs**, including versioning and refactoring of internal tools for production use.
- **Automated workflows using Azure Functions** and performed full **Azure Storage migration** using CLI and scripting.
- Implemented **multithreaded SMTP email notifications** to optimize onboarding and mentored peers on unit testing best practices.
- Led **resolution of critical production bugs** in Flask-based user registration systems and upgraded APIs to support backward compatibility.
- Conducted enterprise-level **R&D comparing LLMs for cost-effective deployment** and supported internal AI toolchains and logic.

OpSyCon Services LLP   **July 2024 – February 2025**

Software Engineer Intern (Remote)

- **Developed RESTful APIs** using **FastAPI** and **SQLite**, contributing to core **backend logic** for client product tools.
- **Transitioned into frontend development** with **React.js** enhancing product UI and integrating **AWS services**.
- Collaborated closely with the team to ensure smooth **feature delivery**, with a focus on **code quality** and maintainability.
- **Engaged in problem-solving and debugging**, ensuring timely resolution of issues during development cycles.
- **Demonstrated adaptability** by taking feedback constructively and consistently improving **technical and communication skills**.

Projects

VeinChain | *Solidity, Remix IDE, Truffle, Flask, React,TypeScript,nGrok*   **September 2024 – March 2025**

- A finger vein authentication system that uses blockchain for **secure and reliable biometric authentication.**
- Utilizes **Solidity and Truffle** for smart contracts on ethereum network to ensure **high security and decentralization.**
- Developed **low-cost hardware** for finger vein detection, enhancing accessibility and affordability.
- Blockchain ensures **tamper-proof and verifiable authentication data.**

Live Emoji Detection GUI | *Python, Keras, OpenCV, Tkinter,Flask*   **January 2025 – April 2025**

- Processes live video feed to capture **keypoints of facial expressions in real-time.**
- Uses a **CNN model** trained on keypoints to recognize emotions and display corresponding emojis.
- Built using **Python with Keras** for model training and inference, **OpenCV for video processing**, and **Tkinter** for GUI.
- Real-time emoji prediction **enhances user interaction and engagement.**

EDU-AI | *Flask, HTML, CSS, JS, MySQL, Random Forest Classifier*   **April 2024 – June 2024**

- **Adaptive learning platform** tailored by Myers-Briggs traits and VARK learning model.
- Implemented **Random Forest Classifier** for personalized user experience, achieving a **20% improvement in accuracy**.
- Provides insights to **enhance learning patterns and offers personalized learning materials.**

Education

Rajagiri School of Engineering and Technology Nov. 2021 – May 2025
Bachelor of Technology in Computer Science and Engineering (Honors in AI and Machine Learning) *Ernakulam, Kerala*
- CGPA: **9.45**

Devagiri CMI Public School May 2019 – May 2021
Higher Secondary School in Computer Science (CBSE) *Kozhikode, Kerala*
- Percentage: **98.6%**

St. Mary's EM School May 2008 – May 2019
High School (ICSE) *Kozhikode, Kerala*
- Percentage: **95.6%**

Technical Skills

Programming Languages: **Python, C, JavaScript, MySQL,Solidity,C#,Java**
Cloud Platforms:**AWS,Microsoft Azure**
Developer Tools: **VS Code, Google Collab, GIT,Remix IDE,Ganache,Truffle,Visual Studio**
Technology/Frameworks: **Flask, React JS, FastAPI,.NET**

Achievements

Vice President of CSI SB,RSET
S rank in all mathematical subjects for B.Tech
Ex-Student Council Member(2022-2023)
Ex-Class Representative (2022-2023)
Second topper of the batch in 12Th.
Second topper of the batch in 10Th.

Certifications

Foundation **C#** with Microsoft: freeCodeChamp
Introduction to **Machine Learning**: NPTEL
Python Basics: HackerRank
SQL Basics: HackeRank
Problem Solving Intermediate: HackerRank