

Andrew David Flavian Kanickairaj

AI & Software Developer — M.Sc. Student in Artificial Intelligence
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[GitHub](#) — [Portfolio](#)

Professional Summary

I am a passionate software developer and AI researcher pursuing my M.Sc. in **Artificial Intelligence**, with hands-on experience in building intelligent systems using **Python**, **TensorFlow**, and **LLM/NLP models**. I enjoy exploring the intersection of **language understanding**, **robust AI**, and **edge-friendly deployment**. Recently, I have developed AI tools for forensic analysis, biometric estimation, and student-assistant, demonstrating a keen interest in applying **AI for societal impact** and **research translation**.

Education

M.Sc. in Artificial Intelligence 2023 – Present
Brandenburg Technical University (BTU), Germany
Focus: Data Analysis, NLP, LLMs, simulation-based AI, experimental physics and data

B.E. in Computer Science 2019 – 2023
Anna University, India

Skills

- **AI & Algorithms:** Python, TensorFlow, Hugging Face Transformers, Scikit-learn, model evaluation
- **Natural Language Processing:** LLMs (GPT), prompt engineering, text classification
- **Secure AI & Edge Concepts:** mobile AI (Flutter + TF Lite), Docker
- **Frontend/Mobile:** React, TypeScript, Flutter, Firebase, REST APIs
- **Tools:** Ollama, OpenCV, Flask, Git, SQL
- **Languages:** English (Fluent), German (Basic), Tamil (Native)

Work Experience

Student Assistant – Institute of Transportation Systems Nov 2025 – Present
Deutsches Zentrum für Luft- und Raumfahrt Berlin

- Conducted **sentiment analysis** on transport-related data corpora to support passenger experience insights.
- Developed and tested **LLM-based summarization tools** to extract key findings from large text datasets.
- Performed **data cleaning, annotation, and visualization** for analytical reporting.
- Collaborated on AI-based solutions for mobility and transportation research.

Software Developer (Working Student) 2023 – 2024
Util.data GmbH

- Developed modular dashboards in **React**, integrating user data and visual insights.

- Wrote and maintained backend routes using **Flask**, improving query performance.
- Participated in daily scrums and release planning within an Agile team.

Full Stack Developer (Intern)

Codehunters Pvt. Ltd.

2021 – 2022

- Created a school transport tracking app using **Flutter**, integrating real-time GPS.
 - Worked on data structure optimizations for low-latency updates.
 - Collaborated with designers and QA testers for rollout testing.
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Projects

- **BTU Buddy (LLM-Powered Chatbot):** A student support assistant built with **React.js** frontend and **Flask** backend, leveraging **Ollama** to run open-source LLMs locally. Designed to help BTU students with common queries, onboarding tasks, and resource navigation. Integrated structured prompting and context-aware responses with persistent session logic.
 - **CopyFo (AI for Crime Detection):** Surveillance system using **YOLOv5** + **TensorFlow** for detecting weapons or hazardous objects in CCTV footage; applied in mock forensic pipeline.
 - **Ocularity (AI for Eye Screening):** Smartphone app that estimates human eye refractive power using image calibration and neural models; built using **Flutter** and **Python** backend.
 - **AI Injury Predictor (Mini Project):** Modeled injury outcomes using surrogate AI models based on simulated floor acceleration input; inspired by DLR Stuttgart's crash resilience work.
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Certifications

- **IBM:** Predictive Analytics for Aircraft Engines – ICT Academy, 2023
 - **Udemy:** Python for Data Science and Machine Learning – 2025
 - **Udemy:** Complete Python + SQL Bootcamp – 2022
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