

Aaditya Prabu Kandhaswamy

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EDUCATION

College of Engineering Guindy, Anna University

Bachelor of Technology Information Technology ; CGPA: 8.49/10.00 (First Class)

Chennai, India

Nov. 2020 - Jun. 2024

Srimathi Sundaravalli Memorial School, Chromepet

Central Board of Secondary Education; Class 10: 88%; Class 12: 95.4%

Chennai, India

2017 - 2020

TECHNICAL SKILLS

Programming Languages: Python, JavaScript, Golang, C/C++, C#, Java

Runtime/Platform: NodeJS

Frameworks: React, Express, GIN, Flask, .NET

Libraries: OpenCV, Hugging Face Transformers, NumPy, Pandas, TensorFlow, Scikit-learn

Developer Tools: VS Code, Insomnia, IntelliJ IDEA, Grafana, Jaeger Tracing, GitHub, BitBucket, Confluence, JIRA, Unity Engine, Blender

DevOps Tools: GoCD Pipelines, Docker, EC2, AWS

Operating Systems: Linux, Unix, Windows

Databases: MongoDB, PostgreSQL, ChromaDB

WORK EXPERIENCE

IDFC FIRST Bank Limited

Application Engineer

Chennai, India

Jul. 2024 - Present

Squad: Fraud Risk Management

- Currently working on Project Optimus, a web and mobile banking application, with a focus on building rule engines, and tracking and blocking malicious activities to enhance system security
- Developing machine learning systems to detect anomalies in customer behavior, automating scripts for generating daily and monthly rule breach reports, and creating proof of concepts to introduce and validate new ideas
- *Skills: Python, Golang, NodeJS, MongoDB, Redis, Kubernetes, Docker, AWS, React, GOCD Pipelines, Grafana, Unleash Feature Toggles, Jaeger, JIRA, Confluence*

PROJECTS

Newspaper Visual Question and Answering

Aug. 2023 - Jun. 2024

- **Objective:** To develop an end-to-end Retrieval-Augmented Generation application that efficiently searches a vector knowledge database of e-newspapers and fetches the best matching articles related to the prompted question
- It uses YOLOv8 to segment the newspaper into individual entities, OCR to extract the content, a vector database to store the content, and a Sentence Transformer (all-MiniLM-L6-v2) to find the best match for the question within the knowledge database
- It also includes a feedback mechanism that suggests previously asked similar questions and their related articles to users, enhancing user experience and accuracy of 41.96%
- *Tools/Technologies: React, Python, Hugging Face, SQLite 3, ChromaDB, Roboflow, Tesseract OCR*

AR-Tutor

Mar. 2023 - May. 2023

- **Objective:** To develop an AR application that tracks human pose coordinates using a webcam, streams the data in real time, and uses a smartphone to receive the stream and augment a coordinate-mapped 3D human model onto a real-world plane surface
- It utilizes multi-threading to broadcast the coordinates and receive the coordinates at different processing speeds, which is bridged by a buffer queue
- AR Tutor was selected for representing IT Department for NAAC evaluation
- *Tools/Technologies: Python, Socket Programming, C#, Unity AR/VR, Media Pipe Pose Tracking Library, Threads*

Student Performance Prediction and Analysis

Jul. 2022 - Sep. 2022

- **Objective:** To analyze the Open University Learning Analytics dataset to understand student performance and dropout patterns using clustering algorithms and data mining techniques
- Predicted student performance using various supervised machine learning models and the most efficient and accurate model was Artificial Neural Networks, which had a 90% accuracy score
- *Tools/Technologies:* Python, Scikit-learn, Pandas, Numpy, Matplotlib, Seaborn

Attendance System

Nov. 2021 - Jan. 2022

- **Objective:** To develop an online attendance system that integrates face detection to verify a student's presence via webcam when they submit their attendance photo, allowing lecturers to cross-check submissions with registered photos for authentication
- It includes multiple attendance submissions for students at random intervals during the lecture
- IT Department lecturers found this very innovative and helpful
- *Tools/Technologies:* Javascript, HTML/CSS, Bootstrap, Go Lang, PostgreSQL, pg Agent, FaceDetection.js

INTERNSHIPS

IDFC FIRST Bank Limited

Jan. 2024 - Jun. 2024

Project Intern

Chennai, India

- Developed a movie booking application using Golang, ReactJS, and PostgreSQL by applying principles of Test-Driven Development (TDD), CI/CD pipelines, and Agile methodologies
- Explored the fundamentals of Business Analysis through collaborative team sessions and practical exposure
- Conducted technical sessions on Computer Networks, Operating Systems, and WebSocket programming, as well as non-technical sessions like "Food for Thought," highlighting the importance of mindful eating

Pavartha Software Ltd

Jun. 2023 - Jul. 2023

App Development Intern

Chennai, India

- Developed an Ionic-Angular Android application using sunset-sunrise JS library, that displays the sunrise and sunset time when a location is given

POSITIONS OF RESPONSIBILITY

Head Of Events

Jun. 2023 - May 2024

Anna University Student Entrepreneurship Club, CEG

Chennai, India

- Managed and led a team of 100 for organizing the signature event of Anna university - "ENANTRA"

NSS Unit 1 Team Leader

Aug. 2022 - May 2024

Nation Service Scheme, CEG

Chennai, India

- Organized multiple blood donation and community service camps, and supported orphanage children by painting their living spaces and teaching basic math and science, with a team of 20

Class Representative

Jul. 2023 - May 2024

Information Technology Department, CEG

Chennai, India

- Took responsibility of assigning classrooms, preparing schedules by checking the availability of faculties, collecting assignments and projects, mediating between the students and the faculties

ACHIEVEMENTS

Selected for Presentation at NAAC Evaluation

Sep. 2023

Anna University

Chennai, India

- AR Tutor project represented the IT Department at the National Assessment and Accreditation Council which is a government organization in India that assesses and accredits Higher Education Institutions

First Place in VYUHA '21 Blank Coding

Jul. 2021

Anna University

Chennai, India

- Secured first place in Blank coding which is an Anna University's Tech Event

Third Place in I++ '21 · OLPC and OSPC

May 2021

Anna University

Chennai, India

- Competitive coding events conducted by Information Technology Club of Anna University both in online and offline modes