

# AMAAN MOHAMED KALEMULLAH

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## EDUCATION

### M.S., Data Science, Analytics and Engineering

August 2024 - Present

Ira A. Fulton Schools of Engineering, Arizona State University, Tempe, AZ

Relevant coursework: Statistics for Data Analysts, Data Processing at Scale, Data Mining, Information Assurance Security

### B.Tech., Computer Science and Engineering

August 2020 - May 2024

Vellore Institute of Technology, Chennai, India

Relevant coursework: Design and analysis of algorithms, Deep Learning: Principles and Practices, Speech and Language Processing using deep learning, Discrete Mathematics and Graph Theory

## PROFESSIONAL EXPERIENCE

### NeuralHire — Deep Learning Intern

Jul 2023 – Oct 2023

- Documented and maintained over 10 scripts (>2000 lines) for video and speech processing using OpenCV and Praat.
- Developed a face detection model using HaarCascade to track off-screen movement in real time.

### Vellore Institute of Technology, Chennai — ReactJS Development Intern

Jun 2022 – Jul 2022

- Created dynamic, responsive tables in ReactJS with user-configurable rows and columns for UI tools.

## ACADEMIC PROJECTS

### Heart Attack Prediction

Jan 2025 – Apr 2025

- Analyzed clinical heart disease data and identified age-specific risk factors through literature review and EDA to support targeted health interventions.
- Built and optimized SVM and kNN models for heart attack prediction, focusing on clinically relevant features and interpretability thereby achieving 87.7% accuracy.

### Medical Image Disease Classification

Aug 2023 – Nov 2023

- Built a multi-model ensemble using ResNet50, MobileNet, and EfficientNet B7 to classify gastrointestinal diseases into four categories.
- Achieved high accuracy by fusing model predictions for robust classification.

### Form Processing with LayoutLMV3

Aug 2023 – Nov 2023

- Built an automated form processing system by training and finetuning the LayoutLMv3 model, enabling accurate extraction of structured data from forms using visual cues and spatial information to identify and extract key sections.

### Video Summarizer using Transformer Models

Feb 2023 – Apr 2023

- Extracted keyframes using LUV Colorspace and generated concise captions with GPT-3 via a Transformer-based encoder.
- Converted long-form videos into readable summaries for educational applications.

## PUBLICATION

C=Conference

[C.1] Kalemullah, Amaan Mohamed. "Deepfake Classification for Human Faces." *Proceedings of the 7th International Conference on Circuit Power and Computing Technologies (ICCPCT 2024)*, IEEE, May 2024.

doi:10.1109/ICCPCT61902.2024.10672973

[\[Paper\]](#)

## AWARDS

### Semantic Sprint – 1st Place

- Designed a voice-based assistant for the visually impaired using BERT for question understanding and GTTS for spoken responses related to transportation queries.

### GI Bots – 2nd Place

- Implemented an OCR-based system to extract content from engineering diagrams and convert them into scalable SVG format for enhanced digital accessibility.

## TECHNICAL SKILLS

**Data Analysis and Statistics:** Matplotlib, Tableau, R

**Programming:** Python, Java, C/C++

**Databases and Cloud:** MySQL, PostgreSQL, AWS

**Certifications:** IBM Artificial Intelligence Analyst - May 2023