Salman Faris N

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A highly motivated Computer Science student with a passion for developing innovative solutions for modern hitch. I am eager to explore cutting-edge technologies and apply them to solve challenging real-world problems. My goal is to contribute meaningfully to research and industry projects while constantly learning and growing in the field of technology.

Education

2022–2027 **Integrated M.Sc. in Computer Science (AI & Data Science)**, *Cochin University of Science and Technology (CUSAT)*
Coursework: Machine Learning, Deep Learning, Data Science, Computer Vision, Cloud Computing, NLP.
Expected Graduation: 2027.
Current GPA: 7.93/10 (till 6th semester).

2020–2022 **Higher Secondary (Science Stream)**, *M.E.S Raja Residential School*

2010–2020 **Matriculation**, *Markaz English Medium School*

Research & Academic Projects

Microplastic Detection in Marine Bodies (YOLOv5, Python)

- Developed an object detection pipeline to identify microplastics in marine body images using the YOLOv5 architecture.
- Preprocessed a custom dataset by converting annotations to YOLO format and splitting it into training and validation sets.
- Applied data augmentation and experimented with multiple input resolutions (416, 640, 800) to optimize accuracy–performance trade-offs.
- Trained and evaluated the model locally due to data privacy and resource management constraints.
- Achieved high precision in detecting small microplastic particles, demonstrating feasibility for marine conservation applications.

Named Entity Recognition (NER) with GLiNER – Internship, PixDynamics Pvt. Ltd. (2024) , Infopark, Kochi.

- Completed a one-month industry internship at PixDynamics Pvt. Ltd. (13 May 2024 – 13 June 2024)
- Gained hands-on experience in data preparation, annotation, and implementation of Named Entity Recognition (NER) models.
- Implemented data extraction from driving license images using the PaddleOCR.
- Understood the application of NER in extracting predefined categories such as names, organizations, dates, and numeric entities from unstructured text.
- Annotated datasets using LabelImg after setting up a dedicated virtual environment in Anaconda.
- Prepared structured datasets for training and testing, ensuring quality data pipelines for object detection and entity recognition tasks.
- Designed and optimized NER workflows to improve the accuracy of document information extraction.

MediConnect – Cloud Computing Project (MERN + WebRTC)

- Developed a MERN stack web application to streamline the doctor–patient booking process, reducing wait times and improving continuity of care.
- Enabled digital interactions and virtual consultations, making healthcare accessible to patients unable to attend in-person visits.
- Integrated an online meeting feature using WebRTC, allowing real-time face-to-face video and audio consultations.
- Built the frontend with React.js, while the backend was implemented using Node.js with MongoDB as the database.
- Deployed the application on Google Cloud under a free-trial plan to demonstrate cloud hosting capabilities.
- Deployment was discontinued after the free-trial period, but the system remains fully functional for redeployment on scalable infrastructure.

Consumer Price Index (CPI) Analysis & Forecasting (R, ARIMA)

- Analyzed CPI dataset (Kaggle) and carried out extensive data preprocessing and visualization.
- Visualizations such as Scatter plot, Line plot and Heat map made the project easier to interpret.
- Applied ARIMA time-series models to forecast future price trends with accuracy evaluation.
- Delivered insights on inflation trends and their implications for economic planning.

Pharmacy Management System (Java, MySQL)

- Designed and implemented a GUI-based management system for pharmacy workflows.
- Supported CRUD (Create, Read, Update, Delete) operations with a connected MySQL database.
- Improved inventory handling, sales tracking, and streamlined pharmacy operations.

Other Projects

- Face Recognition (OpenCV, Haar Cascade): Implemented face detection and recognition in Python.
- Handwritten Digit Recognition (CNN, MNIST): Built a digit recognition system using convolutional neural networks.
- Digital Signal Processing (Python): Implemented Parseval's theorem, Laplacian filters, and Gaussian smoothing experiments.

Achievements

2024 **2nd Prize – AI Samasya Hackathon** International Conclave on Generative AI, Thiruvananthapuram.

- Developed an AI-based learning platform tailored for visually impaired learners.
- Designed frontend using React.js and backend services with Flask.
- Demonstrated real-world application of Generative AI in inclusive education.

2025–Present **Technical Team Member – IEDC, CUSAT**

- Contributed to technical development and innovation activities of the Innovation and Entrepreneurship Development Cell.
- Supported in organizing hackathons, workshops, and student-led projects at CUSAT.
- Actively involved in promoting a culture of innovation, entrepreneurship, and technology-driven solutions.

Techincal Skills

Programming Languages	Python, C++, Java, JavaScript, R, SQL/PLSQL
Databases	NoSQL (MongoDB), MySQL
Frameworks & Libraries	TensorFlow, PyTorch, YOLOv5, OpenCV, Scikit-learn, Flask, React, Node.js
Tools	GitHub, VS Code, Figma, Jira, LaTeX
Cloud Platforms	Google Cloud (deployment, hosting)

Languages

English	Fluent
Malayalam	Native speaker
Hindi	Intermediate proficiency