Benedict Chacko Mathew

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Thodupuzha, Kerala, India

Professional Summary

Full-stack developer, AI/ML practitioner, and security researcher building responsive web applications, cloud-based AI solutions, and production-ready ML workflows. Built multiple websites, conducted 20+ penetration tests, and delivered applied ML solutions across React, Node.js, Python, Microsoft Azure, Docker, and modern security tooling.

Education

Viswajyothi College of Engineering and Technology **Vazhakulam, Kerala**
Bachelor of Technology in Computer Science & Engineering | ***CGPA: 8.5/10.0*** *Expected: May 2027*

- **Relevant Coursework:** Data Structures & Algorithms, Machine Learning, Deep Learning, Database Management Systems, Computer Networks, Operating Systems, Artificial Intelligence, Software Engineering

Work Experience

AI/ML Intern **February 2026 - Present**
Infosys Springboard *Remote*

- Built a **visa processing time prediction platform** on the **EasyVisa dataset** with **25,480 records** and domain-aware temporal labels
- Performed **EDA** and feature engineering across **23 engineered columns** to improve model signal quality
- Trained models with **5-fold cross-validation**, selected **Random Forest Regressor**, and deployed the app using **React 18, Vite, Flask, Netlify,** and **Vercel**

Freelance Web Developer & Security Researcher **January 2023 - Present**
Freelance Experience *Remote*

- Developed and deployed responsive websites and web applications using **HTML, CSS, JavaScript, React,** and **Vue.js** across client, personal, and competition projects, improving online presence and user experience
- Identified and responsibly disclosed **15+ security vulnerabilities** (**XSS, CSRF, IDOR, SQL Injection**) across various web applications, adhering to **OWASP Top 10** standards
- Conducted comprehensive penetration testing for **20+ programs** using **Burp Suite** and **OWASP ZAP**, delivering actionable remediation reports that enhanced security posture

AI & Azure Cloud Intern **June 2025 - August 2025**
Edunet Foundation *Remote*

- Deployed scalable machine learning solutions on **Microsoft Azure**, utilizing **Azure ML Studio** to manage model lifecycles, versioning, and automated retraining pipelines
- Architected cloud-native computer vision system implementing custom **CNNs** with **TensorFlow** for image classification, achieving **92% accuracy** and improving speed by **20%**
- Automated dataset ingestion workflows using **Azure Data Factory** and **Python** scripts, streamlining training for **100K+ images**

Project Experience

AI-Enabled Visa Status Prediction & Processing Time Estimator | **Python, React, Vite, Flask, scikit-learn** **March 2026**

- Built an end-to-end visa processing time prediction system using the **EasyVisa dataset** with **25,480 records**, covering preprocessing, feature engineering, modeling, and deployment
- Created a **React + Vite** frontend and **Flask** backend with **Netlify** and **Vercel** deployment, enabling live predictions, confidence scoring, trend analytics, prediction history, and responsive access across mobile and desktop
- Selected **Random Forest Regressor** after **5-fold cross-validation** and packaged a reusable prediction engine, scaler, and milestone outputs

The Silent Invigilator - Real-Time Exam Malpractice Detection System | **Python, OpenCV, MediaPipe, YOLOv8** **2026**

- Built a **real-time, non-intrusive exam invigilation system** that analyzes webcam or video input to flag suspicious behavior such as **phone usage**, **gaze aversion**, **multiple-person presence**, **abnormal head movement**, and **suspicious hand gestures**
- Implemented **face counting**, **3D head-pose estimation**, **iris-ratio gaze tracking**, **mouth activity detection**, **hand tracking**, **posture monitoring**, and **YOLOv8 phone detection** using **OpenCV**, **MediaPipe**, and **NumPy**
- Added **temporal behavior analysis** with anomaly scoring and a **dashboard UI** showing risk level, live status indicators, recent alerts, FPS, time, and JSON report generation

Stroke Prediction ML Model | **Python, TensorFlow, Scikit-learn, Pandas** **February 2025 - April 2025**

- Architected a machine learning classification system using **Logistic Regression, Decision Tree,** and **Random Forest** models to predict stroke probability with **85%+ recall** and **82% precision**
- Conducted extensive **Exploratory Data Analysis (EDA)** with **Matplotlib** and **Seaborn** to identify **12+ key risk factors** for medical stakeholders
- Implemented **SMOTE** to handle severe **1:10 class imbalance** and reduce false negatives in critical health predictions

Technical Skills

Programming Languages: Python, JavaScript, Java, C++, SQL, HTML5, CSS3, TypeScript
Web Development: React.js, Vue.js, Node.js, Express.js, Flask, FastAPI, Django, RESTful APIs, GraphQL
Databases & Storage: MySQL, MongoDB, Firebase, Redis, SQL Server
AI & Machine Learning: TensorFlow, Keras, PyTorch, Scikit-learn, Pandas, NumPy, SciPy, XGBoost
Data Visualization: Matplotlib, Seaborn, Plotly, Tableau, Power BI
Computer Vision & Deep Learning: OpenCV, YOLOv8, CNNs, Transfer Learning, Image Processing
Cloud & DevOps: AWS (EC2, S3, Lambda), Microsoft Azure (ML Studio, Data Factory), Docker, Kubernetes, CI/CD
Tools & Platforms: Git, GitHub, GitLab, VS Code, Jupyter Notebook, Google Colab, Postman, Figma
Security Testing: Burp Suite, OWASP ZAP, Metasploit, Nmap, Wireshark, OWASP Top 10
Core Competencies: Data Structures & Algorithms, Object-Oriented Programming, System Design, Agile/Scrum, API Development, Database Design, Model Deployment, Security Testing, Technical Documentation

Achievements & Leadership

- Serving as **Cyber Security Lead** for the campus **MuLearn Community**, leading peer-learning initiatives and hands-on security practice programs
- Coordinated and mentored campus technical events, coding competitions, and hackathons, including **5+ workshops** engaging **100+ student participants**
- Delivered technical sessions on **vibe coding, cybersecurity, bug bounty, web design,** and **blockchain** through campus organizations and department-led programs
- Identified and responsibly disclosed **15+ security vulnerabilities** across multiple platforms, receiving official acknowledgments from bug bounty programs