Ahmed Abdul Rahman

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EDUCATION

University of Massachusetts Amherst   Amherst, MA
B.S in Computer Science, GPA: 3.7   *Graduation Date: May 2025*
- Chancellor's Scholarship Award & consistent Dean's List honoree (Fall 2022 – Fall 2024)

EXPERIENCE

Founder & CEO   August 2024 – Present
GradeWise | *gradewise.ai* | Python, Next.js, React, FastAPI, GPT-4, NLP, Firebase, Vercel
- Architected and scaled GradeWise, an AI-powered educational platform, to 1000+ active users, leveraging Next.js, TypeScript, and FastAPI to deliver personalized exam preparation.
- Engineered a production ML system combining custom PyTorch models with GPT-4, processing 50K+ student responses with 98% accuracy. Vector embeddings and RAG implemented for enhanced grading precision, reducing false positives by 75% compared to baseline models.
- Designed a real-time analytics engine handling 10K+ daily events using Firebase, featuring custom ML pipelines that improved student performance by 45%. Built predictive modeling achieving 85% accuracy for exam scores.

Lab Research Data Scientist   October 2024 – Present
PAK Lab | Python, R, Seurat, AWS, NumPy, Pandas, scikit-learn, Docker
- Spearheaded development of production-grade bioinformatics pipeline leveraging distributed computing on AWS EC2, implementing parallel processing optimizations and containerized workflows that scaled to process 200,000+ cells with 99% accuracy in automated cell-type classification.
- Engineered state-of-the-art data integration system using RPCA and ensemble machine learning algorithms, achieving 75% faster processing times and developing novel quality control parameters that improved cell-type identification precision by 60% across complex experimental conditions.

Software Developer   August 2024 – Present
BUILD UMASS | *Aarti Home* | React Native Expo, Node.js, Express, MongoDB, AWS
- Spearheaded the end-to-end development of a cutting-edge mobile app to empower women and girls in India, integrating rich multimedia, interactive quizzes, and an AI-driven chatbot (RAG model) within a resilient offline-first architecture.
- Collaborated with technical stakeholders to drive agile development, optimize scalability, and enforce rigorous QA and debugging protocols—laying the groundwork for seamless future cloud integration across diverse devices.

Software Engineer Intern   August 2022 – September 2022
Saudi Alawwal Bank | Python, SQL
- Performed advanced SQL-based analysis of financial transactions, uncovering critical customer behavior trends and supporting the development of a high-accuracy fraud detection algorithm.

PROJECTS

CreditPro | *Python, React, Flask, PostgreSQL, AWS, Docker, Redis*   May 2024 – October 2024
- Built a SaaS platform that democratizes credit ratings for small businesses unable to afford expensive ratings from agencies like Moody's and S&P, serving 20+ SMBs with accurate credit assessments.
- Engineered and trained ML models on historical financial data and existing credit ratings to predict creditworthiness for small businesses at 2% of the cost

SkinKare | *Python, Django, TensorFlow, NumPy, scikit-learn, AWS*   June 2023 – October 2023
- Architected and deployed a multi-model ensemble system using TensorFlow and PyTorch, and scikit-learn to classify skin lesions from medical images, achieving 93% accuracy on a dataset of 20,000+ images.
- Built scalable data pipeline with AWS S3, EC2, and Hadoop to process 10GB+ of medical imaging data. Engineered Google Cloud's TPUs and deployed models on AWS SageMaker, reducing training time by 65%

TECHNICAL SKILLS

Languages & Frameworks: Python, JavaScript, TypeScript, React, Next.js, FastAPI, Node.js, Django, Vue.js
AI & Data: OpenAI GPT, PyTorch, Pandas, NumPy, SQL, MongoDB, Firestore, scikit-learn
DevOps & Tools: AWS, Vercel, Firebase, Git, REST APIs, Google Cloud, Framer Motion, HTML/CSS, MySQL