MOHAMMED TIJANI

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EDUCATION

University at Albany GPA: 3.79
Degree: B.S. Computer Science and Applied Mathematics | **Minor:** Mathematics Graduated: May 2025
Programming Languages: Java, JavaScript, C#, Python. | **Web Technologies:** HTML, CSS, XML, React, Node.js, Frontend Development.
Cloud & Infrastructure: AWS (DynamoDB, EC2, Lambda, S3), Cloudflare, Docker, Kubernetes. | **Database:** PostgreSQL, MySQL, Redis.
Data Analysis & ML: Pandas, NumPy, Matplotlib, scikit-learn, MATLAB, Statistical Analysis. | **Development Tools:** Git, GitHub, Version Control, Shell, PowerShell, Insomnia.
Business Intelligence: Power BI, Tableau Public. | **Other:** MS Office Suite, ETL Processes, Embedded Systems.
Summary: *Passionate full-stack developer with AWS and Data Science expertise.*

Entrepreneurial Experience

Your Bis (Web Service) → Queens, New York
Founder/Developer May 2025 – Present
Tech Stack – Node.js, Cloudflare, AWS, Postmark

- Engineering robust, self-hosted Linux API servers, implementing HTTPS and token-based authentication to deliver secure and high-performance web services.
- Managing end-to-end web deployment, from domain registration and DNS to SSL provisioning, and utilizing Cloudflare Tunnels for reliable client site hosting, achieving 99.99% uptime.
- Developing and integrating Google Analytics dashboards for comprehensive real-time visitor metrics and conversion funnels, persisting data in AWS DynamoDB for scalable analytics.
- Optimizing website performance by integrating image compression and CDN, resulting in 60% reduction in page-load times and improve SEO.
- Successfully acquired 10+ clients paying for their online business solution through strategic competitive positioning, fostering strong client relationships.

Flash Application → Remote
Founder/Development Lead March 2019 – August 2022
Tech Stack – .NET, C#, Java, Redis, MySQL, Git

- Developed and launched a flash game, building a community of 5,500 members on social platforms over 3 years.
- Led a team of (4) developers, (8) artists and (12) moderators to release frequent updates and design new mechanics (e.g., Projectile Ricochet, Community Market, Battle Pass, Global raids) to meet player base demands.
- Migrated the database of 5000+ players from MySQL to Redis, leveraging the in-memory storage and data structures making query time up to 4 times faster, offering a smoother gameplay user experience at a cheaper cost.
- Improved cross-functional communication and data accessibility by implementing data replication and synchronization between European and U.S. servers (enabling real-time updates/collaboration) and organizing team tasks using Discord and GitHub for enhanced visibility.
- Achieved 15-35% monthly player growth consistently over a year, generating $10K in annual revenue, and drove a game runtime of 99.8%.

Professional Experience

The Research Foundation for The State University of New York Albany, New York
Undergraduate Research Assistant March 2025 – May 2025
Tech Stack – Python, Pandas, NumPy, Matplotlib, scikit-learn

- Assisted with the deployment, calibration, and maintenance of high-grade air quality instruments and low-cost sensor servicing.
- Processed, cleaned, and validated large-scale air quality datasets, 16,000+ data points over 2 years to prepare data for analysis and modeling.
- Developed Python scripts utilizing Pandas and Matplotlib to generate comparative data visualizations, such as customized box plots, for analyzing air quality trends and anomalies across different monitoring network types (e.g., NYC Mesonet, Micronet).
- Engineered features (e.g., one-hot encoding for location/season) and trained a Random Forest Classifier model on extensive datasets (750,000+ data points) to predict pollutant types based on environmental and temporal features.
- Analyzed and interpreted complex air quality data by creating statistical summaries (e.g., model performance metrics) and visualizations (e.g., classification heatmaps, feature importance plots) to identify patterns.

BEAM Manhattan, New York
Math Teaching Assistant Intern July 2024 – August 2024

- Mentored and guided 20+ middle school students through a 100-problem challenge, covering foundational and advanced mathematical concepts including Game Theory, Number Theory, and Combinatorics.
- Designed and implemented hands-on teaching methods, utilizing physical objects and manipulatives, using blocks to model combinatorial possibilities, colored tokens for game theory payoffs, or demonstrating logic puzzles like the counterfeit coin problem with actual coins as class-wide visual aids to explain abstract concepts.

(*See next page for personal projects / extracurriculars →)*

Projects *GitHub →*

CAPSTONE CGM Application (NDA)

Tech Stack: JS, expo, Python, Tableau Public, NumPy, Pandas, Git, React

- Identified a growing need for proactive diabetes management tools that not only monitor but also predict glucose fluctuations.
- Trained a Machine Learning model using the Deep Forest algorithm in Python on historical time-series glucose level data (14M+ data points from 400+ individuals), leveraging university high-performance computing resources to generate predictive insights (e.g., caution alerts).
- Designed and delivered a Continuous Glucose Monitoring (CGM) application with real-time glucose monitoring by integrating various user health inputs (e.g., meal logs, activity data), a predictive tool analyzing trends every 5 minutes via server API calls, and data visualizations (e.g., glucose trend graphs using Tableau Public and react-native-chart, predictive alerts for potentially abnormal levels) to empower end-users.

MORDLE BOT →

Tech Stack: Python, scikit-learn, Tkinter, PIL

- Designed and implemented a machine learning system capable of predicting the optimal next guesses in a custom Wordle-style game.
- Automated over 100,000 games using a custom wordle algorithm achieving an average of 4.2 tries to guess words.
- Developed a robust data preprocessing pipeline, including custom encoding of word and feedback sequences, converting game interactions to vectors.
- Trained and fine-tuned a Random Forest Classifier using historical game data, achieving high predictive accuracy of up to 93% accuracy.
- Leveraged advanced statistical methods to identify underlying patterns, improving both prediction consistency and model efficiency.

YRBIS (Local Business App) →

Tech Stack – JS, expo, AWS, OpenAI, Git

- Identified a need for small business promotion, leading to the creation of a full-scale Android/iOS application (using React Native/Expo) to address the need for increased small business visibility and streamline the business creation experience by enabling users to post and promote their businesses.
- Designed and implemented key features including secure user authentication for onboarding, AI-assisted business description crafting and tag generation alongside location fetching/display for post creation, and automated content appropriateness checks (OpenAI API) for content moderation to simplify user workflows and ensure platform integrity.
- Streamlined the business creation experience and demonstrated scalable mobile app architecture with an AI-enhanced user interface, utilizing AWS DynamoDB for backend data storage.
- Enhanced UX with intuitive UI and real-time feedback on content quality.

Shank Java Language Compiler

Tech Stack: Java

- Developed a compiler in Java for the “Shank” language, featuring loops, data types, and recursion.
- Implemented semantic analysis, tree nodes, and efficient memory management techniques improving the compiler's performance by 75%.

Extracurriculars

Tau Epsilon Phi, Incorporated

New Member Educator (NME)

- Planned and coordinated chapter events for incoming new members.
- Raised over $5,000 for our military kids.