

Tarik Amraoui

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EDUCATION

New Jersey Institute of Technology

Newark, NJ

B.S. in Computer Science

- **Major GPA:** 3.61/4.00, *Dean's List*
- **Related Coursework:** Advanced Data Structures & Algorithms, Objects & Design, Computer Organization & Programming, Advance Databases(SQL/MongoDB), Data Science, Object-Oriented Programming, Statistics

EXPERIENCE

Headstarter

Newark, NJ

Software Engineering Fellow

July 2024– Present

- Developed and deployed **5+ AI-powered applications and APIs** leveraging **Next.js, OpenAI GPT models, Pinecone vector databases, and Stripe API** for payment processing, achieving 98% accuracy while serving over 1,000 users
- **Led the full lifecycle development** of multiple projects, from design to deployment, guiding a team of 4 engineering fellows, and adhering to MVC design patterns, resulting in a **20% decrease in project delivery time**
- **Collaborated with industry experts** from Amazon, Bloomberg, and Capital One, gaining hands-on experience in Agile methodologies, CI/CD pipelines, Git, and microservice architecture

Incedo Inc

Newark, NJ

Software Engineering Intern

Sep 2022– Jan 2023

- Engineered an automated data mapping and processing tool using the MERN stack, resulting in a **90% improvement in data consistency** and enhanced file readability for clients while reducing the need for manual intervention
- Identified bottlenecks and implemented solutions leveraging **React.js, Express.js, and Node.js**, resulting in a **15% improvement in processing speed** and rendering for large datasets.
- Established and optimized a **CI/CD pipeline** using Travis CI, integrating automated build, test, and deployment processes, **reducing deployment time by 30%**

PROJECTS

NYC Primary Care Machine Learning Model ([Project Link](#))

Engineer

July 2024– July 2024

- Administered **data pre-processing** including **data cleaning, normalization, and feature engineering** to ensure quality
- Implemented a Linear Regression, Kernel Ridge Regression and Theil Sen **machine learning model** to Identified key care factors contributing to mortality rates in NYC hospitals
- Leveraged **Python, Matplotlib, Seaborn and Power BI (with DAX)** to visualize accuracy, precision, recall, and R2/F1 scores. Used to uncover strong relationships among targets with up to 80% accuracy

ChatDoc AI PDF Parser and Interviewer ([Website Link](#))

Engineer

March 2024 – June 2024

- Developed an AI-driven PDF parser with chatbot and AI job Interviewer using **React, TypeScript, and Tailwind CSS**
- Engineered a video transcription API in **Python** with **FastAPI**, Google Cloud Speech-to-Text, Deepgram and Celery
- Employed **Drizzle ORM** and **TypeScript** to query and manage user-specific data, enhancing performance

Facial ID and Gesture Web Authentication ([Project Link](#))

Engineer

Jan 2024 – April 2024

- Developed a **Flask** computer vision app utilizing **OpenCV's** facial recognition algorithms in conjunction with the face recognition module in Python to detect and identify faces within the captured video frames
- Deployed a database architecture transformation by transitioning from storing raw images to facial encodings within **SQL**, leading to a **95% optimization in storage efficiency**, enhancing scalability and retrieval performance
- Implemented real-time video feed update feature using SSE in **JavaScript**, slashing server-side resource usage by 40%
- Deployed on **AWS EC2** with Auto Scaling, ELB for high availability and **AWS S3 buckets** for object storage

SKILLS

Programming and Tools: Java, Python, Flask, JavaScript, Excel, SQL, Node.js, React.js, C++, C, PHP, Bash, AWS, Git, Bootstrap, Agile, TravisCI, Azure Devops, Docker, Predictive modeling, Data analysis, Machine learning, AI, NLP, PowerBI, Snowflake