Mohamed Amara

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EDUCATION

Cuny College of Staten Island   Expected 2027
Bachelor of Science in Computer Science   *New York, NY*

Leadership/Affiliations: Google Developers Group, Leader on our spotlight project
Best Final Project Winner in Software Development Class

EXPERIENCE

Software Development Intern   March 2025 – May 2025
Auristor Inc.   *Remote, NY*
- Built Go monitoring system with 150 metrics and Grafana dashboards, reducing incident detection time by 40%.
- I lead the team to design and build the user interface based on the given mockups/wireframes.
  Designed the frontend using React and Tailwind CSS to ensure a smooth user experience.
- Used SSH to connect to intern servers and monitor system metrics including requests, containers, storage, and deployments.
  Dockerized builds and automated deployment with Jenkins CI/CD, enabling weekly releases at 99.9% uptime
- I also handled Q&A and provided technical support for dashboard-related questions.

PERSONAL PROJECTS

AI Audio Stem Separator   *Python, FastApi, Cuda, PyTorch* | Source Code   *Jan 2024*
- Developed an AI-powered app that separates audio tracks into 4 distinct stems: vocals, drums, bass, and other instruments.
- Integrated with FastAPI to manage API endpoints in a clean and well-documented manner.
  I Ensured 100% user-friendly design with both desktop and web API accessibility.
- Applied machine learning models trained on audio frequency patterns to classify stems with 99% accuracy.
  Provided users with two options: a web interface or a desktop application that runs via Python script.
- Identified market gap in accessible audio processing tools and developed cost-effective alternative.

ChatZY *NextJS, ReactJS, NodeJS, Python, Socket.io, WebRTC* | Link   *Oct 2022*
- Built a real-time video and text chat app using web-socket that connects users worldwide, using collaborative filtering to
  recommend conversations based on user behavior and location.
- Enabled super private and secure end-to-end conversation between two individuals and,
  I made and open-sourced API for anyone who may want to use the application sometime in the future.
- I managed to use firebase to store messages so the users can see their messages and I created a github account
  to store files in object array form, and re-order them when needed so I don't pay for file storages like: AWS.

Spotlight *NextJS, Supabase, NodeJS, Python, Socket.io, Aws, Teamwork* | Live Demo   *May 2025*
- Worked with my classmates of 4 to build a highly advanced and award-winning class project that helps students
  post project, events, and get feedback from other students and professors.
- We wrote a Machine learning recommendation algorithm using scikit-learn and tensorflow to
  dynamically suggest feeds to every user based on interaction and engagements.
- We finished the project as a team and we were able to present it to the class, and it was rated the best class project 2025.
  We used, supabase (backend), Aws for file storage and python for recommendations.

Object Detector *Python, Opencv, Cuda, Yolo, Numpy* | Source Code
- Completed an advanced object detection application that I intend to use on a robotic project in the future
  where, it won't only use it sensor but also know what it's seeing.
- Using Yolov8 module, and highly advanced libraries like: numpy, pillow, and opencv, I was able to smoothly
  run the users webcam with no lags.
- This wasn't an easy project, mainly because of false positive reduction in real-time processing,
  balancing detection accuracy with frame rate performance, temporal consistency across video frames,
  memory management for multi-scale detection, I had a hard time balancing all these, but I managed to fix them.

SKILLS

Languages: Advanced in JavaScript, TypeScript, C++, Go, Python; Proficient in C#, Java, PHP, SQL
Technologies: AWS, GCP, Cloudflare, Next.js, React.js, Nuxt.js, Vue.js, Node.js, Express.js, Flask, React Native, Expo, Tailwind CSS, Socket IO, FastApi, MySQL, PostgreSQL, Supabase, Cuda, Numpy, Yolo, Pytorch