

Ahmad Basyouni

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EDUCATION

Verrazano Honors @ CUNY College of Staten Island

New York, NY

Bachelor of Science in Computer Engineering, Minor in Computer Science – **GPA: 4.0/4.0** (Dean's List)

May 2026

Relevant Coursework: Object Oriented Programming, Operating Systems, Computer Architecture, Data Structures and Algorithms

Affiliations: Headstarter Fellow, CodePath Tech Fellow, Computer Science Teaching Assistant, Computer Science/Engineering Club

TECHNICAL SKILLS

Languages/Databases: Python, C/C++/C#, Javascript, Typescript, Swift, Java, .NET Core, PHP, Go, R | SQL (Postgre, MySQL), MongoDB

Frameworks: Pytorch, Node.js, Django, React, Next.js, Flask, Langchain, RestAPI, Express.js, Jenkins, Angular, Spring Boot, Tailwind

Developer Tools: AWS, Docker, Linux, Git, AzureOpenAI, Tableau, Google Cloud, Microsoft Workspace, Jira, Trello, Figma

EXPERIENCE

NYU (New York University) | Machine Learning/AI Researcher

May 2024 - Present

- Researched GPT's (LLM) emotional intelligence capabilities, benchmarking against advanced PyTorch models (Torchmoji and BERT).
- Applied vectorization methods for Natural Language Processing and utilized LSTM networks to improve DeepMoji's model accuracy by 30%.
- Trained and Fine-tuned a Reinforcement Learning PyTorch model, optimizing for stressed and anxious emotions by 70%.
- Engineered 10 new emojis into the emotion mapping of a Federated Learning-based BERT model and tracked backward loss, resulting in a 40% increase in prediction accuracy on a dataset of 300 sentences mapped with emojis.
- Explored Deep Learning implementations and ML algorithms' trade-offs, focusing on theoretical foundations and ML project lifecycle.
- Utilized Langchain to facilitate context grounding and prompt engineering by chunking queries and incorporating sequencing operations.

New EIC | Software Engineering Intern

May 2024 - Present

- Led the Software Development Life Cycle for a school system web application, integrating data-based charts, analytics, and AI features using React, Node.js, OpenAI, and MongoDB, resulting in a platform now utilized by over 1000 students in China.
- Launched 50+ Express routes to expand backend functionalities/API capabilities and implemented lazy loading for scalable performance.
- Collaborated with a team of 15 engineers to produce detailed technical and product documentation, while conducting rigorous code reviews, resulting in a notable reduction in inquiries and enhanced software quality standards.
- Implemented CI/CD pipelines, reducing deployment time by 30% for timely updates and enhancements to the school system platform, while also initiating the initial development stages of an iOS dashboard app using Swift and Xcode.

SEO Tech Developer - Goldman Sachs | Software Engineering Intern

April 2024 - Present

- Completed 300+ hours of software engineering training led by Goldman Sachs engineers, focusing on full-stack development.
- Gained proficiency in DevOps using Ansible/Terraform, preparing for cloud-based integration/systems testing.
- Engaged in data engineering tasks, focused on data integrity and security principles within a Linux environment, utilizing version control and agile methodologies, including paired programming, scrum, and application resiliency.
- Led development of Valorant Helper, an AI-powered web application that enhances player strategy with real-time game stats and answers.
- Optimized data retrieval efficiency by 80% over the Valorant API by integrating Python with Flask and Next.js, utilizing SQLite3 for data management, and streamlining CI/CD workflows and testing processes.

Dyali Interiors | Front End Developer

May 2023 - September 2023

- Built and maintained a web app using HTML, CSS, and Javascript (D3.js) to present interactive architectural visualizations for clients, resulting in a notable 20% increase in customer engagement.

PROJECTS

Game Chill + ArabnadaLive (Ongoing) | *Typescript, Next.js, Express, Docker, FFmpeg, Firebase, Auth, Google Cloud*

[GitHub](#)

- Engineered a video processing system using Google Cloud Storage, Pub/Sub, and Cloud Run, enhancing efficiency and scalability for asynchronous video transcoding.
- Established user sign-up and authentication through Firebase Auth, ensuring secure video uploads with signed URLs for Cloud Storage, enhancing user experience and data integrity.
- Designed a Twitch bot using Node.js and TMI.js to moderate my Twitch channel as a small streamer with limited moderators, leading to a 35% increase in monthly revenue and averaging 50 viewers. Building a Next.js frontend for the community to interact and share clips.

FutHub | *Next.js, Supabase, Tailwind CSS*

[URL](#)

[GitHub](#)

- Developed and deployed a scalable social media platform for soccer fans with Next.js, Tailwind CSS, Firebase Auth for user management, and Supabase for backend services and real-time updates.

Hospital Chatbot | *Python, TFLearn, NLTK, Sklearn, TensorFlow, Numpy, Pandas*

[Demo](#)

[GitHub](#)

- Led the development of a Machine Learning Hospital chatbot at an MLH Hackathon, by training and automating a neural network prediction model to provide health guidance with an accuracy of 97%.

CERTIFICATIONS

- **JP Morgan Software Engineering Forage Job Sim** | *Contributing to Open Source, Data Visualization/Analysis, Git*
- **Codepath Web Development 102/Mobile Application Development iOS 101** | *React, Next.js, Swift, UIKit*