# Tajwar Rahman

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## EDUCATION

**City College of New York** – *Bachelor of Science in Computer Science*  Expected Graduation: May 2025
*Relevant Courses:* CodePath: Advanced Software Engineering, Data Structures, Algorithms, Distributed Systems, Operating Systems

## SKILLS

- **Programming:** ***Strong:*** Python*(5y)*, JavaScript*(4y)* ***Intermediate:*** Java*(3y)*, Go*(3y)*, C++*(3y)*, SQL*(2y)*, GraphQL*(2y)*, C#*(1yr)*
- **Frameworks:** React, React Native, Nodejs, Nextjs, Angular, Express, SwiftUI, Cypress, Jest, Jenkins, TensorFlow, Remix
- **Software:** AWS, Azure, GCP, Git, Docker, Kubernetes, Machine Learning, Redis, MongoDB, HTML/CSS, RestAPI, Jira
- **Certificates:** AWS Cloud Practitioner, 100 Days of SwiftUI, Machine Learning with Python

## EXPERIENCE

**Software Engineer Intern, Enterprise Data Machine Learning – *Capital One (McLean, VA)***  June 2023 – August 2023
- Spearheaded the creation of a bootstrapped platform to streamline the Unusual Activity Report (UAR) data collection process
- Leveraged cutting-edge technologies such as Next.js, Golang, and AWS and best practices to design and deploy a scalable solution, improving data accuracy and reducing manual effort by automating key processes
- Enabled real-time monitoring, anomaly detection, and predictive modeling, providing actionable insights to identify potential risks and enhance fraud detection
- Conducted comprehensive unit tests on Next.js components to ensure their reliability and functionality and on HTTP requests to the API to validate data exchange, using Cypress and Jest
- Executed tests on Lambdas, using Behave, to validate their performance, data processing, and integration with the frontend
- Worked closely with stakeholders from various departments, including Compliance, Risk Management, and IT, to iteratively enhance the platform's functionality, resulting in increased user adoption and improved efficiency

**Software Engineer Intern, Frontend & DevOps – *MetLife (New York, NY)***  May 2022 – December 2022
- Successfully executed the migration of a comprehensive subset of components and services from AngularJS to Angular 13, resulting in a significant 40% reduction in latency
- Optimized build/release pipelines in Azure DevOps to automate deployments using power shell scripts, decreasing the deployment lead time by 2-3 minutes
- Engineered an innovative automated onboarding process for new hires, resulting in substantial cost savings of over $300K
- Implemented proactive notifications within a chatbot platform utilized by over 43,000 employees, enhancing communication and information dissemination across the company

**Tech Lead – *The Headstarter (New York, NY)***  March 2022 – December 2022
- Collaborated closely with the CTO to accelerate a comprehensive backend architecture redesign, transitioning from an express framework to a serverless infrastructure, which resulted in an outstanding 80% reduction in monthly AWS resource costs
- Led the refactoring initiative of the legacy codebase, migrating it to Next.js and implementing AWS CDK, boosting performance by an impressive 60%, and delivering a seamless user experience
- Introduced caching such as CloudFront in media related content to decrease video loading time by 66%
- Orchestrated a successful platform launch, resulting in the acquisition of over 500 users and generating more than $20K in revenue

**Founding Engineer – *The Headstarter (New York, NY)***  August 2021 – March 2022
- Developed video platform in 45 days for startup's launch in October, which had 40+ users, using React, Express, and AWS
- Streamlined user experience by creating custom React components, resulting in an 8% reduction in clicks and improved average user page navigation time
- Utilized AWS services such as Cognito, EC2, S3, SES, CloudFormation, Lambda, and DynamoDB by working alongside the backend team, which increased productivity by 30%
- Pioneered a robust paywall and subscription management system using Stripe, enabling efficient handling of 15K users/month

## PROJECTS

**MyGPT**  June 2023
- Built ChatGPT from scratch using Google SentencePiece and a baseline bigram language model, which incorporated loss calculation and text generation
- Constructed the transformer architecture by inserting a single self-attention block and expanding to multi-headed self-attention
- Scaled up the model by introducing variables and incorporating dropout for improved performance

**QuickDrop**  March 2023
- Initiated the development of a cross-platform React Native application designed to optimize carpooling efficiency for dropping off friends to their respective homes
- Devised an approach to implement different maps such as Waze and Google and add users to the driver's pool

**Resu-Match**  January 2023
- Improved job matching by creating a Chrome extension that displays real-time insights between user resumes and job descriptions
- Focused on building Nextjs frontend with authentication using AWS to give users detailed analytics on their resume and to provide relevant examples to enhance their resume