Matthias Takele
164 Stanton St #5A New York, NY 10002 | (301) 674-0188 | matthiastakele@gmail.com | LinkedIn
Open to Software Engineering Positions

Education
Massachusetts Institute of Technology September 2019 - May 2023 *Cambridge, MA*
- Graduate with B.S. in Computer Science and Engineering
- *Key Courses*: Fundamentals of Programming (6.009), Introduction to Algorithms (6.006), Introduction to Machine Learning (6.036), Elements of Software Construction (6.031), Design and Analysis of Algorithms (6.046), Mathematics for Computer Science (6.042), Embedded Systems (6.08), Microcomputer Project Laboratory (6.115)

Springbrook High School August 2016 - June 2019 *Silver Spring, MD*
- *Key Courses*: AP Computer Science Principles, AP Computer Science A, AP BC Calculus, Multivariable Calculus

Work Experience
Software Engineer I @ Datadog (Revenue Query team) August 2023 - present *New York, NY*
- Developed and tested pipelines to ingest and transform large datasets from S3 into PostgreSQL, integrating schema validation, data freshness, billing dimension alignment, and historical data backfills
- Built a shim layer to migrate hourly and summary usage data to a Relevant Usage (more contract aware usage) schema, ensuring compatibility with legacy APIs while integrating updated billing dimension mappings
- Created a cron job to automate dataset deprecation thus improving operational efficiency and maintaining data integrity with monitoring dashboards and injecting useful logs tracked within the Datadog app
- Implemented a billing dimension mapping API to map billing dimensions attributed to a customer's contract to cost and usage values across various endpoints our team manages (hourly, summary, attribution, etc.)

Software Engineering Intern @ Datadog (Revenue Query team) June 2022 - August 2022 *New York, NY*
- Developed a StarLoader Dynamic Migration Change Tracker to identify and resolve discrepancies between PostgreSQL databases and local Docker environments
- Aggregated and validated six months of historical organizational data to improve frontend retrieval times for usage and billing graphs
- Built and maintained billing and usage APIs that were reliable, secure, and scalable for our customers/teams

New Technologists Program Intern @ Microsoft June 2020 - August 2020 *Virtual*
- Learned about the product lifecycle and used that knowledge to work with a team to create a prototype
- Conducted research on our web app's target users by giving out surveys to complete and doing interviews
- Created a social media web app prototype using HTML, CSS, TypeScript, React, and Git
- Communicated effectively and worked together with 4 team members, two coaches, and a mentor on this project
- Pitched our final product to Microsoft staff and execs

Project Experience
Calial (Software Studio Final Project) December 2022 - Present
- Created a concept outline and wireframes on Figma with my team for a new social media app
- Designed an app logo with Adobe Illustrator
- Implemented the frontend view of the web app with HTML, CSS, and Vue
- Learned how to integrate my app with a database through the use of MongoDB to store and receive data effectively
- Utilized SDKs to enhance my app in ways such as a third party login (Google and Facebook)

Star Battle (Elements of Software Construction Final Project) December 2021
- Programmed in Typescript to create a star battle game (place exactly two stars in each row, column, and region)
- Created a parser to decode the response (puzzle to solve) from a GET request made to a remote server
- Designed a class to represent puzzles with methods such as adding a new star, checking if won, etc.
- Wrote HTML code to interpret the current game state from the puzzle object and display that state to the user

Maze Racing Game (Embedded Systems Final Project) April 2020 - May 2020
- Created a multiplayer maze racing game using the ESP32 Wi-Fi microcontroller and a remote server
- Wired an LCD screen, buttons, LEDs, buzzer, and sensors (e.g. accelerometer) to a breadboard
- Wrote hardware code using C to decode response from remote server and split code into two separate cores
- Wrote backend code using Python and MySQL stored on a remote server to handle GET and POST requests from ESP32

Skills Python, Go, SQL, Typescript, React, Java, C++, Docker, Kubernetes, Terraform, AWS, Firebase, Git, Jira, CI/CD, Swift