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Nicholas Chaloult

Education

August 2017 — December 2021 (Expected) **Candidate for Bachelor of Science in Computer Science**, *Georgia Institute of Technology*, Atlanta, GA.
- GPA: 3.86/4.00
- Threads: Intelligence, Info & Internetworks

Experience

September 2020 — December 2020 **Software Engineering Intern**, *Ultimate Software*, Remote.
- To be determined
- Will be using **C#** to contribute to an application built with **ASP.NET**

June 2020 — August 2020 **MLH Fellow**, *Major League Hacking*, Remote.
- Selected as **one of 150 Fellows from a pool of 20,000 applicants** to be a member of the Fellowship's inaugural class
- Used **TypeScript** and a **cross-compilation toolchain** to implement functionality in the **AWS Amplify CLI** that allows users to write, test, and deploy **Lambda functions** with **Swift**
- Wrote user-facing documentation and guides, as well as developer-facing design documents, with the AWS Amplify team

May 2019 — August 2019 **Software Engineering Intern**, *DataScan*, Alpharetta, GA.
- Established pattern for new REST API endpoints in a **Spring Boot** application that perform lightweight existence/authorization checks for subresources
- Relocated frequently accessed, but rarely modified, information from an **Oracle database** to a **Redis** in-memory cache

January 2018 — Present **Rise Up Undergraduate Assistant**, *College of Computing, Georgia Institute of Technology*, Atlanta, GA.
- Lead weekly webinars and monthly in-person sessions, explaining and demonstrating fundamental computer science concepts to Georgia high school students
- Helped organize and run the 2018 and 2019 **AP Bowl**, during which **over 300 Georgia high school students** took a mock AP Computer Science exam

Involvements

August 2019 — Present **GT Solar Racing**, *Telemetry Team Member*.
- Redesigned an existing two-way telemetry message protocol to support many more types of messages to the car
- Maintaining server written in **Go** that listens for and processes car vitals in real time via a TCP connection
- Integrating **Grafana** visualization tool with **InfluxDB** to monitor the state of the car as it races

Personal Projects

Web Application — Ongoing **Codenames**, *An interactive implementation of the Codenames board game*.
- Users may create new games and join ongoing ones, and interact with the game board in real time
- Wrote a server in **Go** that sends and receives event messages to and from clients via **Websockets**
- Planning to persist game states to a **Postgres** database so that unfinished games may be resumed in the future
- Planning to deploy the server and database in **containers** on **Heroku**, and hosting the web application with **Firebase**

Discord Bot **HMM Mutterer**, *Generates messages of the same vocabulary and sentence structure as a corpus*.
- Uses a **hidden Markov model** created from a customizable corpus to produce messages in a Discord text channel
- Used **Go** to implement a content generation model, and to build a bot which parses commands from users and posts messages
- Wrote a comprehensive **unit and integration test suite**. Deployed a **Docker image** to **Heroku's container registry**

Mobile Application **Many Voices for Museums**, *A more interactive alternative to audio tours in museums and art galleries*.
- Users may filter and search through artwork, and play audio recordings of critics' thoughts about that artwork
- Wrote a **React Native** application that fetches and displays content from an **S3** bucket through the **AWS SDK for Node.js**

Web Application **Friendly Competition**, *Compares a League of Legends player's recent in-game performance with that of their friends*.
- Aggregates and visualizes hallmark in-game statistics for four players, letting them compare themselves to each other
- Wrote a **Node.js** application to fetch and analyze in-game performance data from HTTP APIs
- Used **JavaScript** and **React** to build a web front-end that displays those results with **Chart.js**

Skills and Attributes

Languages	TypeScript, JavaScript, Go, Java, Python, Swift, HTML, CSS
Frameworks	React, Redux, React Native, Express, Spring, Jest
Tools	Git, Docker, Travis CI, JIRA, Confluence, LaTeX
Technologies	GNU/Linux, Amazon Web Services, Node.js, PostgreSQL, Grafana, InfluxDB, Redis