# David Gorin

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**Portfolio**: david-gorin.com **GitHub:** https://github.com/dgorin6

## EDUCATION

**Georgia Institute of Technology** **Dec 2024**
B.S Computer Science concentrations in AI and Information Internetworks
GPA: 3.91
Undergraduate Coursework: OOP, Objects & Design, Intro to ML, Database Systems, AI, Data Structures, Algorithms, Systems and Networks, Computer Architecture, Computer Networking

## TECHNICAL SKILLS

**Programming Languages:** Python, Rust, JavaScript, TypeScript, Java, C#, C/C++
**Frameworks:** AWS, React.js, Node.js, .NET , Express , Junit, Xunit, NumPy, Scikit-learn , Tenserflow Keras, Pandas, ROS
**Databases:** MongoDB, Azure Cosmos DB, MySQL,
**Tools:** Git, Postman, IntelliJ, Visual Studio, VS Code, and JupyterLab

## WORK EXPERIENCE

**Software Engineer Intern,** Amazon Web Services, Seattle, WA **May 2024 – Aug 2024**
- Built a web crawler in Rust capable of classifying and indexing 5000+ technical documents per day for use in Amazon Q's search index.
- Designed and deployed a cloud architecture to run multiple crawler instances simultaneously.
- Architected a database to store collected information in a way that could be queried by a Quicksight dashboard.
- Fine-tuned and prompt-engineered an LLM pipeline for document classification tasks.

**Software Engineer Intern,** CNH Industrial, Burr Ridge, IL **May 2023 – Aug 2023**
- Developed a React based application for a support team of 50 people to view infrastructure KPI's and create work tickets in Azure DevOps, reducing an hours long process to minutes.
- Created an accompanying microservice in .NET that allowed the application to access all required Azure DevOps services, providing data about 20 projects and streamlining ticket creation through a single entry point.
- Implemented caching through Azure Redis to reduce microservice latency by 90% on repeated requests for project data.
- Added application logging using Serilog and Azure Application Insights to timestamp microservice traces and errors and Azure Cosmos DB to store all information about any ticket created through the application.

**Data Science Intern,** AbbVie, Mettawa, IL **Jun 2022 – Aug 2022**
- Worked on an XGBoost model predicting doctor prescription rates. Optimized data transformation using a gradient descent-based approach to fine-tune hyperparameters of six distinct marketing tactics, improving model accuracy.
- Improved adstock data pre-processing efficiency using numpy broadcasting, decreasing processing time by 90%.

**Researcher,** Advanced Network Systems Research Lab, Atlanta, GA **Jan 2024**
- Utilized mahimahi and pantheon to gather data about the appearance of buffer bloat in last mile networks.
- Ran experiments and plotted data to estimate the relationship between load frequency and buffer bloat.
- Devised and tested possible solutions to buffer bloat caused by the synchronization of multiple request-response clients.

**Researcher,** Vertically Integrated Projects, Atlanta, GA **July 2020 – September 2021**
- Aided in the calibration of an RL model of a roundabout using python and TensorFlow

## PROJECTS

**SpotifAI,** spotifai.net **2023**
- Created an application with React and Node.js that uses OpenAI to generate a Spotify playlist based on a user prompt, allows the user to preview the playlist, and automatically adds the playlist to their account.
- Utilized OOP principles to connect OpenAI API responses with their corresponding Spotify use cases.
- Deployed the application in AWS EC2, complete with load balancing and a reverse proxy using Nginx.

**Atomz Board Game,** atomz.herokuapp.com **2022**
- Developed an online multiplayer strategy board game using React.js and Node.js.
- Integrated remote play support using web sockets via the Socket.io library and Express.

**Self-Navigating Robot,** Robonav, Georgia Institute of Technology **2021 - Present**
- Worked on a team that created autonomous vehicles which participated in the IGVC and URC competitions.
- Wrote software design documents, reviewed with the team, and proposed a schedule.
- Modified the simulation in C++ to exhibit noise in the ground truth pose in order to verify the robot's noise reduction ability.
- Created a rover model to be used in Gazebo simulations using Xacro and wrote a launch script in Python.

**AI Geotagger** **2022**
- Constructed and trained a 7-layer CNN using pytorch to predict a photo's country of origin with 40% accuracy.
- Implemented a custom python script that used the google street view API to gather 20,000 street view images.
- Performed image pre-processing by resizing images and utilizing PCA dimensionality reduction to reduce space.