Spencer Goodwin

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EDUCATION

University of Michigan — Ann Arbor, MI
Bachelor of Science in Computer Science | *GPA: 3.5/4.0* — *Aug. 2021 – May 2025*
Coursework: Data Structures & Algorithms, Web Systems, Computer Science Theory, Computer Organization, Discrete Mathematics, Statistics and Data Analysis, Hardware - Microcontrollers & IoT
Leadership: Dudes for Dads 501(c)(3) Nonprofit (Founder), Pi Sigma Epsilon Business Fraternity (Director of Tech)

SKILLS

Languages: C++, Python, JavaScript, HTML/CSS, R
Frameworks: SQL, Flask, React.js, Node.js, PyTorch, React Native
Technologies: Git, Docker, Postgres, MongoDB, SQLAlchemy, DBeaver, SciPy, Selenium, Firebase, Supabase

EXPERIENCE

Honeywell — Jun. 2023 – Present
Software Engineer Intern — *Cincinnati, OH*
- Deployed a supply chain KPI dashboard utilizing containerization in Docker, SQLAlchemy as an ORM, Node.js, and a Flask server to aggregate and present performance metrics from ∼2.8 million data points at distribution centers
- Constructed a Python data validation internal tool for analytics dashboards using Jira XRay REST API endpoints to ensure uniform data integration from the backend to the UI of a product that drives $120k of annual revenue
- Automated end-to-end testing framework on a workforce management platform serving 1000+ employees by leveraging Selenium Web Driver and PostgreSQL resulting in 50x reduction in manual developer testing time

Tour.Video (YC S21) — Jan. 2023 – Apr. 2023
Software Engineer Intern — *Ann Arbor, MI*
- Developed full-stack B2B management software using React.js and Tailwind enabling 200+ community managers to efficiently track real estate software platforms resulting in a 3x increase in leasing sales and tour bookings
- Engineered the relational database Supabase to securely store and render video files using Postgres to dynamically display new video content by dramatically decreasing the load times to within ∼milliseconds of new user input

Mantula Solar — Jun. 2022 – Aug. 2022
Software Engineer Intern — *Washington, DC*
- Spearheaded development of 20+ components using React.js for company's website while leveraging front-end design expertise in Bootstrap to enhance UX/UI, connect clients to provided solar services, and deploy the site
- Built price calculator with information retrieval based on customer inputs to calculate customized solar panel price quote using a React decision tree resulting in 200% faster rate of customers obtaining accurate price quotes
- Architected cloud database using Firebase to ensure data synchronization and authentication for 15+ customers

MHacks — May 2023 - Present
Director — *Ann Arbor, MI*
- Directing University of Michigan's premier 36-hour Hackathon in November 2023 by leading a team of 20 members to coordinate event logistics, secure high-tier sponsors, and attract an estimated participation of 500+ hackers
- Facilitating development of a custom application portal and event website in React.js and Figma with Supabase

PROJECTS

TableVision | *Python, Flask, YoloV5, Jupyter Notebook, Git, Machine Learning*
- Trained convolutional neural network with Yolov5 in PyTorch for object-detection to classify occupied tables
- Developed model in Google CoLab's Jupyter Notebook on custom image data set to achieve a 73% prediction rate
- Programmed web-app using Next.js and Flask to intake CCTV footage and request the CV model with video data

Machine Learning Stock Predictor | *Python, Git, API*
- Performed data cleansing using openpyxl to resolve data to downstream API's for accurate stock price predictions
- Parsed stock data using SciPy to create a filtered list of stocks from tuning hyperparameters based on weighted measures from analyst historical accuracies to maximize profit with a 65% correct prediction rate

Campus Travel | *C++, TSP Algorithm, Graph Algorithm*
- Implemented the Traveling Salesperson algo setting shortest-tour to an upper bound to find shortest travel routes