Avi Glozman

Backend and Data Engineer

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Education

University of Pittsburgh, Pittsburgh, PA

B.Sc. in Computer Science, **3.4 in-major, 3.2 overall** *Aug. 2018 → Dec. 2020*

Dean's List: *Spring 2020, Fall 2020*

Skills

Programming languages: Python, Node.js, C, C++, C#, Java

Concepts: REST, WebSockets, Distributed Systems, Machine Learning, Operating Systems

Software: Git, Linux, Windows, SQL, NoSQL, Azure, AWS, LaTeX

Spoken languages: English (Native), Russian (Native), Spanish (Partial fluency), Hebrew (Basic), Mandarin (Very basic)

Professional Experience

University of Pittsburgh, SCI, Pittsburgh, PA

Machine Learning Researcher *(Capstone Project)* *May 2020 → Sep. 2020*

- Trained a YOLOv3 object detection model using Darknet for detecting parts of the human spinal anatomy with up to 98% accuracy
- Developed a pipeline for converting CT scan data (DICOM format) into a 3D model, then into 2000+ augmented images for use as a synthetic dataset for model training and testing

Undergraduate Researcher, Learning Technologies Lab *Nov. 2019 → Dec. 2020*

- Used Python and BeautifulSoup to efficiently scrape hundreds of faculty profiles to gain various insights, such as specific research interests, publication data, lab affiliations, etc.
- Compiled scraped data into easy-to-process datasets for use in a university-wide undergraduate research opportunity discovery platform

Uber, Pittsburgh, PA

Software Engineering Intern, Advanced Technologies Group (ATG), Simulation *May 2019 → Aug. 2019*

- Created an ETL system using Python for moving self-driving car related data from DynamoDB to PostgreSQL, and solved complex data-syncing challenges
- Developed pruning algorithms in Python for preventing transfer of broken, invalid, and/or redundant data relating to self-driving car testing
- Contributed significantly to a web API written in Go for self-driving car data analysis in production

aspace, Seattle, WA

Lead Software Engineer, Backend *May 2017 → Oct. 2017 (11th – 12th grade)*

- Designed MySQL and MongoDB databases for storing parking spot sensor data and user data, respectively
- Designed a RESTful API written in Node.js to support UX on Android and iOS apps, and for recieving sensor data
- Wrote an implementation of Dijkstra's algorithm using Node.js for navigation, relying on user location data and data from Mapbox's API
- Used Twilio's SMS API to integrate two-factor authentication into the backend

Please note that the present lack of software engineering internships is solely a consequence of my quick completion of my degree.

Noteworthy Technical Projects

Incompare *(personal, open source via GitHub)* *2021 → Now*
- Using local tax rates and user-provided financial inputs, plots a parrallel coordinate graph with Plotly (using Python)
- Fetches/scrapes relevant data from SmartAsset.com's API using automatically detected, or user-provided zipcode

Lightweight Messenger *(schoolwork)* *2020*
- Used Node.js and Socket.io to design a backend for a lightweight messaging system prototype
- Implemented a RESTful API with Express.js for interacting with a PostgreSQL database for user accounts, contacts, message history, etc.

For more cool projects, don't hesitate to check out my GitHub!

Extracurriculars

Pitt Computer Science Club (CSC) Member and Mentor	*Sep. 2018 → Dec. 2020*
Private Online Mathematics and CS Tutor	*Oct. 2017 → Now*
Wikipedia Contributor (under username *Avigl*) — over 770k all-time article views	*June 2016 → Now*