

Daniil (Daniel) Turpitka

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EDUCATION

Carnegie Mellon University

Master of Science in Software Engineering

Relevant Courses: Foundations of Computer Systems, Foundations of Software Engineering

January 2024 - May 2025

Mountain View, CA

University of California Irvine

Bachelor of Science in Data Science, GPA 3.65

Relevant Courses: Algorithm Design, Data Mining, Data Structures Implementation and Analysis, Advanced Python, Python API's and Libraries

September 2019 - June 2023

Irvine, CA

SKILLS

Programing Languages: C++, C, **Java Script**, Java, **Python**, Assembly, SQL, PostgreSQL

Frameworks: Node.js, Express.js, Socket.IO, MongoDB, TensorFlow, Prometheus, NumPy, MongoDB

Other: RESTful API design, OOP, Computer Systems, HTML, CSS, Algorithm Design, Data Structures

PROFESSIONAL EXPERIENCE

Synopsys

Software Engineering Intern

Hillsboro, OR

May 2024 – Present

- Developed an application for Synopsys IC II Compiler and Fusion Compiler debug data visualization to assist engineers with VLSI process.
- Created a system-agnostic Node.js based platform to host the application and make it instantly accessible to any developer.
- Engineered and integrated LLM based interactive feature to efficiently summarize, analyze provided debug data and produce suggestions on how to fix specified issue.

Apple

Software Engineering Intern

Cupertino, CA

June - September 2022

- Engineered 3 iterations of a **Python** framework leveraging **Prometheus** and Grafana APIs to improve efficiency and reduced required time of identifying and resolving bugs within Machine Learning models by 50% through optimizing utilization of external APIs
- Integrated developed framework into 2 core company services, enhancing detailed monitoring capabilities of vital **performance** metrics, ensuring system stability and reliability and giving DevOps teams greater insight into system's vitals
- Fostered strong collaboration with customer team's data scientists and project managers throughout development, testing, and deployment phases. Incorporated feedback and customer requirements into the system, aligning project with user expectations

PROJECTS

Sudoku AI (Python)

March – March 2023

- Designed a Sudoku AI solver, employing advanced algorithms and techniques in Python. Utilized constraint propagation, backtracking, and heuristic approaches to efficiently solve Sudoku puzzles

Emergency Service Network

May – May 2022

- Working in team, built and REST API based Emergency Service Network where users can chat publicly, privately, see others status, last active time to help navigate search/rescue, find survivors, and organize in groups in case of an emergency
- Technologies used:** JavaScript, HTML, CSS, HTTP, Socket.io, Node.js, Git, ByCryps.js, MongoDB

Online Chat Room (JavaScript, HTML, CSS, SQLite, Node.js)

January – January 2024

- Built a full stack online chatting application from ground up using HTML and CSS for front end and Express, JavaScript, SQLite, and Socket.IO. Implemented user login, signup, credentials check, and message storage and exchange to learn web development technologies

Other:

- C: Memory Allocator, Cache, Proxy Server, Shell

RESEARCH AND OTHER EXPERIENCE

University of California Irvine

Undergraduate Research Assistant

Irvine, CA

March - June 2023

- Designed 4 deep learning networks and two classifiers tailored for analysis of telescope-derived images. These models were instrumental in performing preliminary binary classification of celestial objects by over 95%, leveraging anomaly detection capabilities of **neural networks** trained on highly imbalanced datasets
- Constructed a **Python**-based end-to-end pipeline to facilitate image feature extraction, augmentation, processing, and prediction to efficiently process more than 300,000 unclassified image files and underwent rigorous testing and statistical evaluation to ensure stable accuracy of 87%

UC Irvine Department of Informatics

Tutor

Irvine, CA

September – March 2022

- Delivered instruction on **Python** and **C++** syntax and lead to success in Computer Science course 40+ students