

Daniil (Daniel) Turpitka

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EDUCATION

Carnegie Mellon University

Expected May 2025

Masters of Science in Software Engineering

Mountain View, CA

Relevant Courses: Computer Systems, Foundations of Software Engineering, Networks and Graph Theory, Database Design, Software Design and Architecture, Cloud Infrastructure

University of California Irvine

September 2019 - June 2023

Bachelors of Science in Data Science, GPA 3.65

Irvine, CA

Relevant Courses: Computer Architecture Algorithm Design, Data Structures Implementation and Analysis, Machine Learning, Deep Learning & Neural Networks, Intro to Artificial Intelligence

SKILLS

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

Frameworks: Docker, Hadoop, Kubernetes, Flask, TensorFlow, PyTorch, NumPy, Node.js, Socket.IO, MongoDB

Other: CI/CD, Git, Algorithm Design, Data Structures, AWS (EC2, S3, Route53), Google Cloud Platform, RESTful API design, OOP, LLMs, CNNs

PROFESSIONAL EXPERIENCE

Synopsys

Hillsboro, OR

Software Engineering Intern (Python, C++)

May - August 2024

- Developed a Python-based interactive application in Linux environment for module placement optimization and visualization to assist customers' microprocessor physical design teams with utilizing Synopsys's IC2 and Fusion compilers more efficiently
- Enhanced performance of key app services by over 90% by refactoring core components from Python to C++ and developing high-performance data structures optimized for physical design data
- Developed a custom data structure optimized for fast runtime data retrieval to ensure smooth UI flow

Apple

Cupertino, CA

Software Engineering Intern (Python)

June - September 2022

- Improve efficiency and reduced required time of identifying and resolving bugs within Machine Learning models by 50% through optimizing utilization of Prometheus API and Grafana. Developed and deployed a Machine Learning performance monitoring framework.
- Enabled live performance monitoring capabilities of 2 company's core services by integrating developed framework into existing internal ML platform
- Collaborated cross-functionally with data scientists, non-technical project managers and end users throughout development process

PROJECTS

AI Code Comment Generator (Python, PyTorch) *November 2024*

- Fine-tuned a pretrained LLM to produce short and descriptive summaries of supplied code snippets
- Refined the data set and fine-tuning parameters to produce coherent natural language summaries

Emergency Service Network (JavaScript)

January – May 2024

- As a part of the team, developed a 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. Ensured accessibility of service's functions
- **Technologies used:** Java Script, HTML, CSS, HTTP, Socket IO, Node.js, Git, ByCryps.js, MongoDB

Golf Caddie App – bogeycaddie.com (Python, Flask)

July – August 2024

- Building a full stack online service that suggests golfers what club to use for a given shot based on their previous shots to maximize probability of good shot and minimize round score. Utilized personalized statistical models and Machine learning models to improve quality of suggestions.
- **Technologies used:** AWS RDS, AWS Cognito, AWS EC2, Python (Flask)

Crypto Currency Arbitrage Gainer (F#)

June 2024

- Developing an automated crypto currency trading bot that identifies and executes trades on arbitrage opportunities between different crypto currency exchanges. The entire project is developed following functional programming paradigm