Nadav Oren

Personal info

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Overview

I am a third year student majoring in Computer Science and Mathematics at the University of Michigan. I have experience creating software in several areas through both classes and an internship at LTN Global Communications. I am self-motivated and able to learn new topics quickly. My main interests in Computer Science are in Machine Learning and Data Privacy but I am interested in learning about all fields. Outside of class I am a member of IEEE-HKN (the EECS honor society) and I am also the incoming chair of my campus chapter of iLead, an Israel education and advocacy group.

Education

University of Michigan Ann-Arbor   2020-2024 (in progress)
Computer Science and Mathematics

- Relevant Classes taken:
  Winter 2022
  EECS 370 Computer Organization
  MATH 451 Intro to Real Analysis
  STATS 426 Intro to Theoretical Statistics
  Fall 2021
  EECS 281 Algorithms and Data Structures
  EECS 376 Foundations of Computer Science
  PHYSICS 240 Electricty and Magnetism
  Winter 2021
  EECS 280 Programming and Intro Data Structures
  EECS 203 Discrete Math
  MATH/STATS 425 Intro Probability
  Fall 2020
  MATH 217 Linear Algebra (proofs based)
  ENGR 151 Accelerated Intro to Computers and Programming
  ENGR 100 Intro Engineering

  Cumulative GPA as of April 2022: 3.88

George Washington University   2019-2020
Non-Degree Dual Enrollment classes taken in High School

- Relevant Classes taken:
  MATH 2233 Multivariable and Vector Calculus
  ECON 1011 Intro Economics

School Without Walls HS   2016-2020
High School

Major Projects/Internships/ Extracurriculars

Pipelined Processor Simulator   2022

Wrote a simulator in C for a five-stage pipelined processor for the LC-2K instruction set that included data forwarding to resolve control hazards and predict not taken for branches

Software Development Intern at LTN Global   2021

Was a Software Development Intern at LTN Global Communications.Helped create,debug,and test a customer-facing web portal in React as well as the gRPC and REST based API. Learned a lot about web networking technologies and architecture, developing software on remote Linux-based servers, and relational databases using SQL and MariaDB.

TSP Solver   2021

Wrote a command-line program that given a list of coordinates would give both an apporximate and correct (for small sets of coordainates) Traveling Salesman Problem solution for them. The approximation was using the nearest insertion heuristic and the real solution was using a Branch and Bound algorithm using a Minimal Spanning Tree.

Log Manager   2021

Wrote a Command-line Program in C++ that can manage and make queries on log files. The program could find and sort entries by keyword, category, and timestamp and store and print all relevant entries.

Piazza Post Classifier   2021

Implemented with a partner a Naive Bayes Classifier to classify posts on the Q&A website Piazza by topic given training data. As part of this also implemented C++ std::map using a Binary Search Tree to serve as the data structure for the classifier.

Euchre Simulator   2021

Wrote (with a partner) a simulator in C++ for Euchre, a card game popular in the Midwestern US. This project was object-oriented using interfaces, abstract classes, polymorphism, and unit testing to create a command line simulator compatible for play with a combination of human and computer players using a pre-defined strategy.

Skills

Programming Languages	C++/C, Java, Python, JavaScript(including React),SQL R, MATLAB
Software	Excel(including VBA),Git/Github, Linux(WSL Ubuntu and centOS),vim, VSCode (including Visual Debugger), Regular Expressions, LaTeX
Languages	English,Hebrew