

WENFEI TANG

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EDUCATION

University of Michigan, Ann Arbor, MI

M.S. in Computer Science Engineering

Dec 2022

B.S. in Computer Science with *Honors* and *Distinction*, **Cumulative GPA: 3.825/4**

May 2021

Course Highlights: Data Structures and Algorithms, Web Systems, Introduction to Machine Learning, User Interface Development, Introduction to Computer Security, Electronic Commerce, Compiler Construction, Linear Algebra, Differential Equations

SKILLS

Programming Language

C++/C, Python, HTML/CSS, MATLAB, JavaScript

Software & Tools

Visual Studio, Git, shell scripting, Linux, Pytorch, Microsoft Office, LaTeX, Unity3D

WORK EXPERIENCE

NETSCOUT, Ann Arbor, Michigan

Aug 2021 - Present

Software Engineering Intern - Cybersecurity

- Develop visualization tools for network traffic analysis and cyber threats on web applications at the Cybersecurity Department
- Maintain APIs for mitigations of potential network security problems using Python, React.js, and REST API

University of Michigan, Electrical Engineering and Computer Science Department

Feb 2020 - Present

Graduate Student Instructor, Instructional Aide - EECS 281: Data Structures and Algorithms

- Help manage a class of around 900 students
- Responsible for teaching lab sections, setting up class projects, writing and grading exams, and holding office hours

CONFERENCE

Wenfei Tang, Sundaresh Ram*, Alexander J. Bell, Cara Spencer, Alexander Buschhaus, Charles R. Hatt, Marina Pasca diMagliano, Stefanie Galban, and Craig J. Galban. “**Detection of Cancer Lesions in Histopathological Lung Images Using a Sparse PCA Network**”. Presented at 2021 AACR Conference on Artificial Intelligence, Diagnosis, and Imaging. DOI: 10.1158/1557-3265.ADI21-PO-086. Published March 2021.

PROJECTS

Automated Lung Cancer Lesion Detection on H&E Stained Slides [Code]

July 2019 - Present

Galban Lab, Department of Radiology, University of Michigan

Research Assistant

- Proposed a baseline neural network method called GS-PCANet, which outperforms six other open-source histopathology image classification with the precision of 0.872 and accuracy of 0.908 on a dataset of 67 segmented lung images (~3000×3000 pixels)
- Independently developed an automated computer-aided tool for detection of potential cancerous regions on lung cancer images
- Project abstract accepted and presented on 2021 American Association for Cancer Research Conference as first author

MFocus, A Web Application for Managing Daily Tasks [Code]

Oct 2020 - Dec 2020

- Collaborated with another teammate to develop an efficiency tool for managing tasks with HTML, Javascript (Vue.js) and CSS
- Designed an interactive reward system in the app where users can raise an e-pet
- Users can interact with the e-pet, purchase items for their pets, manage tasks and play Spotify music on the app

Mechanism Design for Parking Allocation Problem [Code]

Oct 2019 - Dec 2019

- Collaborated with another teammate to model the parking allocation problem using a multi-agent system
- Simulated these mechanisms with varied number of agents (up to 2000 agents), number of slots and probabilistic models in Python
- Evaluated three valuation schemes based on the profitability of the mechanism, and the welfare of agents and chose the best pricing system

An Instagram Clone, Dynamic Page Development

Sept 2020 - Dec 2020

- Developed a static site generator from templates using HTML and Python (Jinja2)
- Implemented the server-side dynamic pages with Flask and SQLite
- Designed client application in JavaScript and used the REST API to achieve client-side dynamic pages in a three-memeber group

Compiler Construction

Jan 2020 - Apr 2020

- Built a working compiler to transfer Decaf Language (a strongly-typed, object-oriented language with support for inheritance and encapsulation) into MIPS language (an assembly language) in a two-member group
- Developed both the front end and the back end parts of a compiler including parser, scanner, semantic analyzer, code generator and code optimizer