WENFEI TANG

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EDUCATION

University of Michigan, Ann Arbor *Sept 2018 - Present*
B.S. in Computer Science with *Honors*, Minor in Mathematics Expected Graduation Date: May 2021
Cumulative GPA: 3.79/4.00, University Honors for all semesters
Course highlight: Web Systems(EECS 485), Introduction to Machine Learning(EECS 445), Compiler Construction(EECS 483), Electronic Commerce(EECS 547), Data Structures and Algorithms(EECS 281)

MANUSCRIPT

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**". Submitted. 2020.

EXPERIENCE

Automated Lung Cancer Lesion Detection on H&E Stained Slides *July 2019 - Present*
Galban Lab, Department of Radiology, University of Michigan *Research Assistant*

- Developed a semi-automated tool for detection of potential cancerous regions using graph-based algorithm
- Designed a fully automated tool using PCANet feature extraction followed by a SVM classifier
- Approved as the Honor Thesis for my computer science degree

Machine Learning with Biometrics Data for Personal Health Diagnosis *Jan 2020 - Present*
EECS department, Professor L. Jay Guo, University of Michigan *Research Assistant*

- Read papers on frontier machine learning approach on EHR data
- Develop machine learning based algorithms to translate personal health info into meaningful health improvement

Preventing Speculative Execution Attacks on Web Services *Jan 2020 - July 2020*
EECS department, Professor Daniel Genkins, University of Michigan *Research Assistant*

- Improve Computer system security from hardware and software implementation
- Exploit possible vulnerabilities on web services using spectre attacks
- Develop a methodology to prevent speculative attacks on web services

Compiler Construction *Jan 2020 - Apr 2020*

- Built a working compiler to transfer Decaf Language into MIPS language
- Developed both the front end and the back end parts of a compiler
- The compiler includes parser, scanner, semantic analyzer, code generator and code optimizer

Mechanism Design for Parking Allocation Problem *Oct 2019 - Dec 2019*
EECS department, Professor Grant Schoenebeck *Class Project*

- Proposed three different pricing mechanisms to model the parking allocation problem, deciding the best pricing mechanism
- Simulated these mechanisms under with varied number of agents, number of slots and probabilistic models

Dynamic Index Updates of Moving Taxi *July 2017 - Aug 2017*
Institute of Software, Chinese Academy of Science, Beijing *Intern*

- Analyzed the demands of clients and transform them into project functions, programmed in C++
- Used hash tables to efficiently store taxi locations and applied grid index and nearest neighbor query algorithm to update location

ACTIVITIES

Instructional Aide for Data Structures and Algorithms *Feb 2020 - Present*
Computer Science Engineering Department, University of Michigan

Math Writing Tutor for Intro to Differential Equation *Aug 2019 - Dec 2019*
Math Department, University of Michigan

China Software Cup, Second Prize in the National Final *June 2018 - Aug 2018*
Fast calculation of massive high-dimensional vector similarity

TECHNICAL STRENGTHS

Programming Language	C++, C, Python, Javascript, HTML, MATLAB, C# (Unity3D)
Software & Tools	Linux, Pytorch, Microsoft Office, Visual Studio, Latex, Unity3D, Multisim, QT