

Henry C. Wong

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EDUCATION

M.S. in Computer Science

Missouri University of Science and Technology
GPA: 3.7/4.0

Aug 2020 - May 2022
Rolla, MO

B.S. in Computer Science

Missouri University of Science and Technology
Major GPA: 3.4/4.0 — Cumulative GPA: 3.2/4.0

Aug 2016 - Aug 2020
Rolla, MO

CLEARANCES

U.S Department of Defense Interim Secret Clearance

2018

PUBLICATIONS

Henry Wong, Tie Luo. "Man-in-the-Middle Attacks on MQTT-based IoT Using BERT based Adversarial Message Generation." Twenty-Sixth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), 3rd AIoT Workshop, August 2020.

EXPERIENCE

Washington University at St. Louis

St. Louis, MO

Computational Biology Intern at Spencer Labs

May 2021 - Present

- Worked with Dr. David Spencer to study the genomics of Acute Myeloid Leukemia (AML).
- Built pipelines optimized specifically to Washington University's new compute cluster to process an arrangement of genomics data including Hi-C, ChIPseq, and ATAC data.
- Wrote open source tools used to count DNA barcodes on DNA sequences using Julia.
- Pushed changes into caper, an open source tool made to run ENCODE-DCC pipelines

Missouri University of Science and Technology

Rolla, MO

Graduate Teaching Assistant and Researcher

Dec 2019 - Present

- Taught 104 students for a graduate level Introduction to Artificial Intelligence course
- Covered topics such as A* search, minimax, quiescent states, and alpha-beta pruning
- Instructed Introduction to Programming, teaching fundamentals in C++ programming and achieved one of the highest teaching rating in the department

Liberty Mutual

Portsmouth, NH

Data Science/Cyber Security Intern

May 2019 - Aug 2019

- Analyzed data trends to finalize deals on authentication and user account services
- Saved more than \$3,000,000 in password reset and training resources by developing a password validation web app using haveibeenpwd API and password creation research
- Won both 3rd Place and Employee's Choice at Liberty Mutual's Hackathon
- Used Splunk and Python to analyze authentication trends of over 50,000+ accounts to spot irregularities and vulnerabilities in password reset systems

The Boeing Company

St. Louis, MO

Cyber Security Intern

May 2018 - Aug 2018

- Obtained Department of Defense clearance for multi-million dollar projects
- Enforced the NIST Risk Management Framework for Security Inspections to secure and pass every government classified program at Boeing
- Reduced 3-10 hours per inspection by analyzing data on inspection practices

State Farm

Bloomington, IL

Software Engineering Intern

May 2016 - Aug 2016

- Saved 24 hours per week for IT employees by automating Test Environments in JavaScript
- Reduced help desk wait time by developing a Machine Learning chat bot for policy inquiries
- Designed an interactive Cyber Security lab for 100+ children from The Boys and Girls Club
- Cut load time for over 50 tools by 70% by re-engineering Perl/CGI automation tools
- Built Xbox Kinect application using Java for State Farm PR Events

PROJECTS

www.MoData.blog

Editor-in-Chief

Rolla, MO

Sept 2017 - Present

- Founded a collaborative data blog called MoData.blog with a focus on Data Science
- Held work sessions and created new methods to get peers inspired by data
- Built full stack systems from the ground up including websites, servers, and databases
- Generated over 300 views a week through weekly blog posts on topics ranging from Missouri State Salaries to Terrorism Attacks Across the US

Hospital Helper

Rolla, MO

Team Lead

May 2020

- Created a hospital finder web application that provided users with more information over hospitals in their local area (<https://www.h-helper.xyz>).

What Gets a Paper Published?

Rolla, MO

Researcher

Dec 2019

- Performed statistical analysis on comparing features of published papers in the American Society of Civil Engineering (ASCE) Journal of Construction Engineering and Management.
- Link to report: <https://github.com/HenryCWong/whatGetsPublished>

Ferro Silicon

Normal, IL

Chief Design Officer

Sept 2015 - May 2016

- Co-led an Android Development team to win \$100,000
- Developed a safe driving app to lower the risk of a distracted driver
- Directed a design team to develop a 2D gaming engine and perform consulting work

EXTRA-CURRICULARS

Association for Computing Machinery (ACM)

Rolla, MO

Chair/Founder of the Missouri S&T Hackathon

Sept 2017 - May 2018

- Organized the first Missouri S&T Hackathon, Shamhacks (later renamed to PickHacks) which later grew into the largest hackthon in the state of Missouri
- Negotiated with every campus official to approve the first large scale hackathon

ACM Student Chapter

Rolla, MO

Vice-President

May 2017 - Dec 2017

- Oversaw over 100 peers, helping them find careers and navigate through the tech world
- Rearranged finances breaking our ACM chapter out of a period of consistent deficit
- Organized and marketed weekly events resulting in a 30% increase in active members

MegaMinerAI

Rolla, MO

Vice-President/Show Runner

Dec 2016 - Dec 2017

- Ran MegaMinerAI, a bi-yearly competition for developers to create Artificial Intelligence Programs for our developed game environment
- Hosted MegaMinerAI's 20th Anniversary competition bringing in more than 200 attendees

ACM Cyber Security

Rolla, MO

Special Projects Lead

Aug 2016 - Jan 2019

- Placed 26th in worldwide Capture the Flag(CTF) Competitions under the team M57
- Planned multiple Cyber Security Bootcamps at Sandia National Laboratory

SKILLS

Technologies: C/C++, JavaScript, Linux, Python, R, Julia, SQL, AWS

Libraries: Numpy, Pandas, PyTorch, Scipy, Sklearn, Tensorflow

Awards

ACM KDD Student Registration Award

2020

Missouri S&T Computer Science Mentor Award

2019

Missouri S&T Computer Science Scholarship Award

2018

COURSES

Artificial Intelligence — Deep Learning — Statistical Data Analysis — Intro to Data Science — Combinatorics and Graph Theory — IoT with Applied Data Science — Data Mining