Nathaniel Y. Chong

nathanielchong.github.io • nychong@umich.edu • (571) 332-7096

SCHOOL ADDRESS
205 S. State Street, 3D
Ann Arbor, MI 48104

PERMANENT ADDRESS
14397 Chalfont Drive
Haymarket, VA 20169

OBJECTIVE

Sophomore seeking a software engineering internship (available May - Aug. 2021)

EDUCATION

University of Michigan Ann Arbor, Michigan — May 2023
B.S.E. in Computer Science, GPA: 3.88, Current courses: EECS 376, EECS 370, STATS 412, MATH 214

Battlefield High School Haymarket, Virginia — May 2019
Valedictorian, Rank 1/763. GPA: 4.93/4.0, Early College Scholar

RELEVANT EXPERIENCE

Northrop Grumman McLean, VA — May 2020 - July 2020
Software Engineering Intern, Mission Systems

- Implemented the Cypress testing suite and developed automated E2E test cases for the codebase, thereby streamlining development across 2+ version changes
- Improved and scaled a web-based metrics dashboard (built on the MEAN stack) following the Agile/Scrum methodology
- Collaborated with a cross-functional team on front-end development, bug fixes, and UI changes using React, Type Script, and Java Script

University of Michigan Radiology Lab Ann Arbor, MI — Oct. 2019 - Feb. 2020
Research Assistant, Computer Aided Diagnosis of Breast Cancer

- Analyzed the effect of learning rates across individual layers in a deep learning image diagnosis algorithm in order to prevent overfitting, allowing a potential improvement in diagnosis accuracy
- Gained familiarity with TensorFlow, Keras, and Python by improving the training procedure with data set, activation function, and argument manipulation

U.S. Naval Research Laboratory Washington, D.C. — June 2018 - Aug. 2019
Engineering Intern, Plasma Physics Division

2019 Summer:

- Led the simulation of nonlinear scattering on a diode-loaded dipole to analyze harmonic generation
- Developed 3 nonlinearly loaded dipoles for physical scattering and validation of simulations
- Presented findings at the 2019 Antenna Applications Symposium (100+ attendees)

2018 Summer:

- Devised a novel measurement technique in order to gauge the topside thickness parameter of the ionosphere's F-region for ocean scattering and ionosonde experiments
- Simulated the F-region of the ionosphere for analysis of a mathematical model
- Research to be utilized in future paper (expected completion in 2021)

LEADERSHIP

3-D Printing/Hobby Electronics Club Manassas, Virginia — May 2018 - May 2019
Co-Founder and Co-President

- Founded the organization to teach 15+ peers how to 3-D print, use hobby electronics platforms (i.e. Raspberry Pi, Arduino), and develop skills in soldering/breadboarding

ILITE Cyber Defense Team *Haymarket, Virginia* — Sept. 2015 - May 2019
Secretary and Linux Co-Lead

- Created automated bash scripts in order to secure Ubuntu 14+ operating systems
- Documented meeting minutes and authored monthly newsletters to ensure smooth team operation
- Prepared a thorough curriculum to teach 50+ students about Linux cyber security on a regular basis

AWARDS & of DISTINCTIONS

U.S. NRL Science and Engineering Apprenticeship Program – 1st Place for Outstanding Presentation Summer Research (2018 & 2019)
2019 Amazon AWS In Communities Scholarship Recipient
2019 Raytheon FRC Robotics Scholarship Recipient
2019 Micron STEM Scholarship Recipient
2019 Piedmont Charitable Trust Scholarship Recipient

PUBLICATIONS & CONFERENCES

2019 Antenna Applications Symposium at UIUC

- First author of accepted paper: "Analysis of Nonlinear Scattering with Applications to Harmonic Radar". Paper was presented and released through the annual conference proceedings

SKILLS

Java, C++, Bash, Git, HTML/CSS, Mathematica, MATLAB, Linux, Arduino, Soldering, Basic Korean