Nathaniel Y. Chong

https://NathanielChong.github.io/ • nychong@umich.edu • (571) 332-7096

SCHOOL ADDRESS
701 E University
Ann Arbor, MI 48109

PERMANENT ADDRESS
14397 Chalfont Drive
Haymarket, VA 20169

OBJECTIVE

Seeking an internship or research position in the field of CS, EE or a related field.

EDUCATION

University of Michigan Ann Arbor, Michigan — May 2023
Intended B.S.E in Computer Science

Battlefield High School Haymarket, Virginia — May 2019
Valedictorian, 4.93/4.0, Early College Scholar

George Mason University Manassas, Virginia — May 2019
Dual Enrolled Guest Matriculate, non-degree

University of Maryland College Park, Maryland — July 2016
ENES 100 Introduction to Engineering and Design summer course (3 Credits)

TECHNICAL EXPERIENCE

U.S. Naval Research Laboratory Washington, D.C. — June 2018-August 2019
SEAP Student Research Intern, Plasma Physics Division Code 6754

2019
- Computationally simulated nonlinear scattering on a diode loaded dipole for analysis of harmonic generation
- Built 3 nonlinearly loaded dipoles for physical scattering and validation of simulations
- Findings are to be presented at the 2019 Antenna Applications Symposium at UIUC

2018
- Computationally modelled the F-region of the Ionosphere for analysis of a mathematical model
- Devised a novel measurement technique for the topside parameters of the Ionosphere
- Research is to be presented in a paper (work in progress)

3-D Printing/Hobby Electronics Club Manassas, Virginia — May 2018-May 2019
Co-Founder and Co-president
- Founded the organization to teach peers how to 3-D print and use hobby electronics platforms such as the Raspberry Pi and the Arduino, also taught skills such as soldering and breadboarding

ILITE Cyber Defense Team Haymarket, Virginia — September 2015-May 2019
Secretary and Linux Co-Lead
- Wrote automated bash scripts in order to secure Ubuntu 14+ operating systems
- Documented meeting minutes, and authored newsletters to ensure smooth team operation
- Prepared a thorough curriculum to teach students about Linux cyber security

ILITE FRC Robotics Team 1885 Haymarket, Virginia — September 2017-May 2019
Programming Team Member
- Programmed network tables for robot telemetry, and designed driver display interface to assist robot drivers
- Programmed robot components such as pneumatics, sensors, relays, motors to ensure smooth robot operation

AWARDS & DISTINCTIONS

Science and Engineering Apprenticeship Program – 1st Place for Outstanding Presentation of Summer Research (2018 and 2019)
- Presented research to a panel of judges that consisted of NRL scientists and engineers
- Won based on presentation and research content both in 2018 and 2019

FRC Robotics Team 1885 – District Chairman's Winner (2018, 2019), 1st place in Chesapeake District (2018), District Triple Crown Winner (2018)
2019 Raytheon FRC Robotics Scholarship Recipient
2019 Amazon AWS In Communities 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". Coauthors include Dr. Paul A. Bernhardt and Mr. Joseph M. Coombs.
- Paper is to be presented and released through a conference journal

P. A. Bernhardt et al., "Analytic Electron Density Profiles for Curve Fitting Solutions to Ionosonde, Satellite Occultation, Incoherent Scatter Radar Data and Models," 2018 (Work in Progress).

SKILLS

Java, Bash, Mathematica, MATLAB, Git, Linux, HTML, CSS, Arduino, Soldering, Breadboarding, Korean, Spanish