Nathan Chong

1natechong@gmail.com, 571-332-7096

EDUCATION

Battlefield High School (2015-Present, Early College Scholar)
Governor's School @ Innovation Park (2017-Present)
George Mason University (Dual Enrolled Guest Matriculate, 2017-Present)
University Of Maryland (Summer, 2016)

- ENES 100 Introduction to Engineering and Design (3 Credits)

AWARDS & ACHIEVEMENTS

- *Science and Engineering Apprenticeship Program*
  *1st Place for Outstanding Presentation of Project. I presented my summer research to a panel of judges that consisted of NRL scientists and engineers. (2018, Naval Research Laboratory)
  *Findings regarding Ionosphere research to be published in the future as a student coauthor.
- *Robotics-*
  *FRC Team 1885(2017-Present, Chesapeake District)
  -District Triple Crown Winner (2018)
  -District Chairman's Winner, qualified to attend the 2018 FRC World Championship in Detroit, Michigan.
  -Ranked 1st in the Chesapeake District
  -Won the Chesapeake District Championship, and the CHS District Greater D.C. tournament.
- *Robotics-*
  *ILITE Cyber Defense Team (2015-Present)
  -Platinum competitor in AFA CyberPatriot since 2015; top 10 in state.
- *Academics-*
  *AP Scholar with Distinction (2018)
  *Academic Letter (Honor Roll) (2016 – Present)
- *Hackathon & Capture the Flag-*
  *Team Captain of Summer Hackathon sponsored by BigParser and Microsoft (2017)
  *Team placed in the top 10% in the Phillips Academy Capture the Flag cyber/information security competition.
- *Community Service-*
  *Recognized for volunteering at 2017 Haymaker Steam Expo by Congresswoman Barbara Comstock
  *Attended 2017 WestPoint LEAD conference

EXTRACURRICULAR ACTIVITIES

- 3-D Printing and Hobby Electronics/Maker Club (Co-founder and Co-president, 2018-Present) – Organized a club that teaches fellow students how to utilize 3-D printers and hobby electronics platforms such as Raspberry Pi and Arduino. The club also allows students to have more time to work on their research projects, and we teach programming and soldering as well.
- ILITE Cyber Defense Team (Secretary and Ubuntu Co-lead, 2015-Present) – Competed in CyberPatriot National Youth Cyber Defense Competition. Secured Ubuntu 14+ operating systems.
- ILITE FRC Robotics (2017-Present) – Member of the programming sub-team. Programmed an innovative robot and its control system for the FIRST Robotics Competition
- National Honor Society (2017-Present)
- Mu Alpha Theta Math Honor Society (2017-Present)
- SeaPerch Robotics (2016-2017) – Designed and built an underwater robot
- VEX Independent Robotics Team (Lead Programmer, 2015-2016)- Programmed, designed, and created CADs of a competitive VEX robot
- GHBLL Baseball (2008-Present)

JOB & COMMUNITY SERVICE EXPERIENCE

- FRC Robotics Competitions Volunteer (30+ hours)
- 7-11 Sales Associate (300 hours) – Worked at a local 7-11 convenience store. I managed the cashier, worked in the cooler, and did basic accounting.

- Bull Run Robotics Club Volunteer (27 hours) – Mentored students as they designed and programmed VEX robots
- INOVA Hospital Volunteer (23 hours)
- ILITE Programming Summer Camp (32 hours) –Taught BASIC and Scratch programming with robots to elementary students.
- Tutor for a variety of courses (200+ hours, intermittent)
- Building computers for friends and family (Variable)

SUMMER ACTIVITIES

- SEAP ONR Apprentice (2018) – Accepted as a research intern (paid) at the Naval Research Laboratory in Washington, DC. I devised a method to measure the F-region of the Ionosphere's topside using a ground point receiver, a low orbit satellite receiver, and a ground HF transmitter system. I also simulated results and performed analysis using a Parabolic-Lorentzian Ionosphere model.
- CTY Carlisle @ Dickinson College (2017) – Accepted into Johns Hopkins Center for Talented Youth summer program. Learned fundamentals of electrical engineering. Built a solar powered roller, designed a rocket launching mechanism.
- MMSS @ University of Michigan (2017) – Accepted into University of Michigan's Math and Science Scholar program. Learned introductory graph theory under the mentorship of Dr. Douglas J. Shaw.
- TYS @ University of Maryland (2016) – Accepted into University of Maryland's Terp Young Scholars program, took a 1 credit class, ENES 100: Introduction to Engineering. Learned fundamental principles of physics and engineering. Built a robotic rescue rover that utilized an Arduino micro controller and various sensors.

SPECIAL SKILLS AND INTERESTS

- Programming Languages- Java (3 years), RobotC (3 years), Bash Scripting (1 year), Python (1 year), Arduino (1 year), Haskell (1 year), Mathematica (Novice), MATLAB (Novice)
- Soldering & Bread boarding – Intermediate level
- Digital and Analog circuit simulation with NI Multisim
- Familiarity with microcontroller/computing platforms such as Arduino and Raspberry Pi.
- Git Version Control
- Interested in web & mobile development, embedded system design, and machine learning

REFERENCES:

SEAP Mentor: Dr. Paul A. Bernhardt