ANGELINA TSUBOI

Software and Mechatronics Developer & Aerospace Cybersecurity Reseacher

angelinatsuboi@proton.me www.angelinatsuboi.com

I am a pragmatic and goal-oriented developer with over 10 years of experience in full-stack development with experience in over 20 programming languages developing web and mobile applications, command line tools, developer utilities, hardware prototypes, artificial intelligence models, and much more. I have worked with over 15 startups and organizations in addition to teaching in-person and online aerospace cybersecurity workshops to over thousands of people.

EXPERIENCE

NASA SEES RESEARCHER

May - Aug 2023

- Conducted scientific research for NASA remotely researching the volatile composition and pairings of meteorites collaborating with a team of scientists across the nation
- Collaborated on a paper entitled “Unraveling the Origins and Evolution of Terrestrial Bodies Through Matching and Volatile Signatures” which was submitted and accepted at multiple conferences and organizations such as AGU and MIT’s 2023 UTRC conference

AEROSPACE CYBERSECURITY INSTRUCTOR

2021 - present

- I taught online and in-person workshops around various aerospace cybersecurity topics such as drones, satellites, and aircraft to thousands of people
- My written instructional articles around aerospace security topics have been featured by Pentest Mag, DroneSec, Hackernoon, Hackster.io, Hackaday.io, and many other sources
- I also create instructional cybersecurity content for Retia and attend SecurityFWD’s weekly livestream organized by Varonis
- Attended DEFCON 2022 and sold some of my products including an educational PCB

SOFTWARE & MECHATRONICS DEVELOPER

2019 - present

- Independently contracted with other 15 startups and companies developing a range of technologies such as web applications, security tools, command line utilities, hardware devices, machine learning models for research, and much more.
- I have worked with a wide breadth of web frameworks, programming languages, and maintain proficiency with the latest development tools
- I have also worked on coordinating leads, marketing products, and project management

EDUCATION

CHADWICK SCHOOL

- PROGRAMMING CLUB LEAD, SCIENCE OLYMPIAD, AND INNOVATION AND DESIGN BOARD

SKILLS

Software Development: *Python, Java, Javascript, Typescript, Golang, Rust, C, C++, C#, Swift, HTML, CSS, SCSS, React, Angular, .Net, Flask, Next.js, GraphQL, Firebase, MongoDB, Express, Ionic, React Native, AWS, Vercel, Docker, Django, TensorFlow, SQL, and NGXS*

Mechatronics Engineering: *KiCad, EasyEDA, Fusion360, Soldering, and CAD Design*

Cybersecurity: *Wireshark, GNU Radio, Kali Linux, Ghirda, aircrack-ng, HackRF, and Nmap*

ACCOLADES

FEATURED ON BUSINESS INSIDER AND ENTREPRENUER

Featured for my achievements in the fields of computer science, mechatronics development, and aviation / aerospace. Read the article at this link.

APPLE WWDC SWIFT STUDENT CHALLENGE

I won Apple's international Swift Student challenge for my mobile applications alongside my previous STEM accomplishments. I was invited to present my application to CEO Tim Cook at Apple's headquarters in Cupertino. Read the article at this link.

USAF CADET WINGS & LACSF NAVAL RESEARCH MEDAL

Cadet Wings is an ultra-competitive aviation scholarship that funds up to 65 hours of flight time for selected awardees to receive their private pilot license. I was also given a Research Medal Special Award from the U.S. Navy at the Los Angeles County Science Fair for my science fair submission titled "ADS-B Spoofing Detection using Neural Networks and RF Fingerprinting"

PEOPLE MAGAZINE'S GIRLS CHANGING THE WORLD

I was selected as one of five girls chosen to be featured on PEOPLE magazine for their 2022 International Day of the Girl issue called "Girls Changing the World". Read the article at this link.

PROJECTS

OPEN-SOURCE CYBERSECURITY TOOLS

- SatIntel: OSINT tool for Satellites. Extract satellite telemetry, receive orbital predictions, and parse TLEs
- netspionage: Network analysis framework for enumeration and attack detection
- ADS-B Spoof Detector: Raspberry Pi based device to detect for spoofed aircraft

AEROSPACE CYBERSECURITY COURSES

- I partnered with Pentest Magazine in order to create an online course entitled "Aerospace Cybersecurity: Satellite Hacking" which covers the foundations of reconnaissance, communication dissection, decoding, and vulnerability analysis. Learn about the course at this link.

MOBILE AND WEB APPLICATIONS

- designr: browser extension for inspecting and saving CSS styling on web pages
- Pocket CPR: Apple Watch applications to teach the basics of CPR via haptics
- Pilot Fast Track: a web application for pilots to get access to scholarships
- ctv: a Rust powered command line utility for configuring tree display outputs

PCB BOARDS AND HARDWARE PROTOTYPES

- WiCon Kit: ESP8226 based portable Wi-Fi reconnaissance suite
- nRFi Monitor: 2.4GHz band and WiFi analyzer toolkit
- Meow Mixer PCB: educational PCB sold at DEFCON and other maker spaces
- Open Buoy: buoy device that conducts tsunami detection and marine research