

TROY NEUBAUER

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github.com/TroyNeubauer

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Fairfax, VA

EDUCATION

B.S. in Computer Science

Embry Riddle Aeronautical University

Sep 2020 – May 2023

Daytona Beach, FL

Specialization in CyberSecurity

Non-Degree

George Mason University

Sep 2018 – May 2020

Fairfax, VA

Completed 21 credits of college credit while in high school

SELECTED SKILLS

Soft Skills

- Leadership
- Active Listening
- Constructive Feedback
- Business Management
- Technical Writing
- Lecturing

C++

- RapidJson
- CMake
- Premake
- NS3
- Curl
- OpenCV

Rust

- Tokio
- rocket
- serde

Embedded

- Embedded ARM
- Encoders
- Servos
- XBee RF Module
- Lidar Sensor
- Talon Motor Controllers
- roboRIO

DevOps

- Docker
- GitHub Actions
- Drone CI/CD
- Phabricator
- git
- firewalld
- Fedora 34

Awards

- Bronze Palm Eagle Scout
- Second Place in Innovative Defense Technologies 2017 Black Box Testing contest

Other

- Embedded C
- Wireguard
- Linux Bash
- Wintun
- Netlogo 3D
- STM32
- Lua
- Javascript
- React
- OpenGL

LINKS

View this resume as a WebAssembly app:
tneubauer.xyz/resume

View the source code:
github.com/TroyNeubauer/Resume

ABOUT ME

Driven Computer Science student with a passion for high performance embedded systems. Looking for a challenging position relating to software engineering, aerospace engineering, or robotics.

EXPERIENCE

Chief Technology Officer

null.black Inc

Apr 2021 – Present

Fairfax, VA

- Lead five person technical team in overhauling frontend, backend, VPN app and VPN edge server
- Built VPN edge server currently deployed to 7 servers across the globe that handle terabytes of network traffic
- Created core VPN abstractions for cross platform support across Windows, MacOS, Linux, IOS, and Android
- Oversaw design-oriented rewrite of the https://null.black frontend

Chief Executive Officer, and Co-Founder

Basement Labs Incorporated

Sep 2020 – Present

Fairfax, VA

- Rapid prototyping of mini-projects (embedded hardware and software) for eventual publication on hackaday.io
- Completed filings necessary for tax and licensing compliance

Undergraduate Researcher

Office of Naval Research

Sep 2020 – Present

Daytona Beach, FL

- Researching the effects of Cyber Attacks and non ideal conditions on Communications in UAS Swarms
- Produced optimization tool that found UAV swarming parameters which lead to 72% faster swarm formation time

Software Lead

ERFSEDS Club, Nova Flight Computer

Sep 2020 – Present

Daytona Beach, FL

- Leading 12 person team in creating software for a custom flight computer to be used by Embry Riddle's Future Space Explorers and Developers Society (rocket club)
- Created message protocol for serializing data from three sensors at 1000Hz on microcontroller running at 80Mhz
- Created rocket data simulation utility (acceleration, position, rotation, impulse, etc) for sensors placed on a custom PCB

Vice President

Cryptocurrency Club

Apr 2021 – Present

Daytona Beach, FL

- Organized meetings to further knowledge of Cryptocurrency at Embry-Riddle Aeronautical University
- Gave lectures on the origins of Bitcoin, Hashing, and mining setups

Payload Lead

NASA Student Launch Innovative

Apr 2019 – May 2020

Fairfax, VA

- Collaborated with vehicle, software development and business teams to meet vehicle integration, processing and budgetary requirements
 - Lead development of flight software to compare methods of determining altitude (barometer vs GPS vs accelerometer, vs Pitot tube)
 - Implemented data collection to SD Card and real time RF downlink to ground station
 - Created ground station to render graphs of real time data
 - Oversaw design of Printed Circuit Boards (PCBs) and circuit schematics that met production requirements for fabrication plants in both US and China
 - Defended design choices through briefs, papers and proposals that were thoroughly reviewed by NASA engineers
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Software Lead

First Robotics Competition

Sep 2017 – May 2020

Fairfax, VA

- Lead 5 person software team in completing robot software
 - Forged autonomous mode which made decisions based computer vision and sensor input
 - Delivered driver input data to actuate mechanisms on the robot
 - Placed second in the 2020 Virginia regional Battlefield competition
 - Competed in FRC Worlds 2018, and finished in the top half of our division.
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Vice President

Computer Science Club

Sep 2017 – Jun 2020

Fairfax, VA

- Planned and led meetings, organized a local hackathon
- Gave lectures on topics ranging from net neutrality to N-Body physics implemented in parallel on the GPU
- Executed subcommittee idea that brought accessible personal projects to members