TROY NEUBAUER

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EDUCATION

B.S. in Computer Science
Embry Riddle Aeronautical University

Sep 2020 – May 2023   Daytona Beach, Florida

Specialization in CyberSecurity

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Non-Degree
George Mason University

Sep 2018 – May 2020   Fairfax, Virginia

Completed 21 credits of college credit while in high school

SELECTED SKILLS

Soft Skills
Leadership | Active Listening | Constructive Feedback
Business Management | Technical Writing | Lecturing

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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

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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

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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, Virginia

- 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

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Chief Executive Officer, and Co-Founder
Basement Labs Incorporated

Sep 2020 – Present   Fairfax, Virginia

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

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Undergraduate Researcher
Office of Naval Research

Sep 2020 – Present   Daytona Beach, Florida

- 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

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Software Lead
ERFSEDS Club, Nova Flight Computer

Sep 2020 – Present   Daytona Beach, Florida

- 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

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Vice President
Cryptocurency Club

Apr 2021 – Present   Daytona Beach, Florida

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

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Payload Lead
NASA Student Launch Innovative

Apr 2019 – May 2020   Fairfax, Virginia

- 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, Virginia

- 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.

Vice President
Computer Science Club

Sep 2017 – Jun 2020   Fairfax, Virginia

- 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