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Sergey Petrushkevich

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EDUCATION

Boston, MA **Northeastern University** **May 2023**

- Bachelor's Degree, Combined Electrical and Computer Engineering Major
- 3.82/4.00 GPA
- Part of NU.in program; first semester in Thessaloniki, Greece (American College of Thessaloniki)
- Dean's List, *Member*, Wireless Club, *Member*, IEEE

WORK EXPERIENCE

Software Engineering Co-op **Kythera Space Solutions – Bethesda, MD** **July 2021 – Dec 2021**

- Used **QT/C++** to add enhancement features as well as maintained existing code.
- Supported front-end development of Kythera OS: written in **React**, developed initial UI, and implemented data-layer logic with **React-Redux**.
- Introduced **Python script automation**, executed factory acceptance tests, led daily standup meetings, and re-structured the internal wiki to streamline future onboarding.

Research Assistant **Ultrabroadband Nanonetworking Laboratory – Boston, MA** **Feb 2021 – Current**

- Currently implementing a high-data transfer **PCIe** interface. Includes Verilog setup (**AXI-Stream/DMA/PCIe** modules), **C-driver setup**, as well as a user-space app development (**C++/CSS**).
- Developed a high-performance GUI used to diagnose and show I/Q streams; built using **QT/C++** for framework and **CSS** for styling. Utilizes data pushed from PL to PS via DMA/AXI-Stream.
- Created RotaryLib, a **C++ library** used to control StepNet motors. Processes ASCII motor communication and includes multiple safeguards to protect expensive equipment from damage.

Volunteer / Class Instructor **Fort Lee Public Library – Fort Lee, NJ** **July 2016 – Aug 2018**

- Created Computers 101, a weekly class aimed to familiarize elderly citizens with technology.
- Introduced Networks 101, a follow-up class with the aim to educate citizens on Internet usage and safety.

PROJECTS

RFSoC Dashboard **July 2021 – Current**

- A Windows-based C++ application made in conjunction with QT to handle large UDP packets and efficiently graph them.
- Features a custom-designed GUI, multi-channel I/Q stream support, and multi-carrier constellation support.

Digital Protractor **December 2020**

- Angle of a DE1SoC board shown via 7-segment display and displayed in system terminal.
- Utilized C+ to obtain position measurements and Quartus Prime to create a hardware circuit that converted measurements to show inclination angle of the board.

TECHNICAL SKILLS

Programming: C++, C, Python, JavaScript/CSS, Bash, MATLAB, Visual Basic
Software: Git, SVN**,** Petalinux, Xilinx Vivado, Quartus Prime, PSpice, OrCAD Capture, AutoCAD, SOLIDWORKS
Languages: English (Primary), Russian (Fluent)