

Sovan Yuth Yun

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EDUCATION

Virginia Tech

Blacksburg, Virginia

Bachelor of Science, Computer Engineering - GPA: 3.75

Expected Graduation May 2026

- **Dean's List Recipient:** Spring 2024, Fall 2024
- **Relevant Courses:** Embedded Systems, Data Structures & Algorithms, Computer Architecture, Signals & Systems
Continuous & Discrete System Theory, Applied Software Design, Control Systems, Robotics Systems, Machine Learning

Northern Virginia Community College

Annandale, Virginia

Associate of Science, Engineering - GPA: 3.93

January 2022 – December 2023

SKILLS

- **Computer Skills:** C, C++, Python, MIPS Assembly, MATLAB, LTSpice, EasyEDA, Microsoft Excel, Microsoft Office
- **Engineering Skills:** PCB Design, Debugging, Breadboarding, Circuit Design, Embedded System, Signal Processing, Analog Filter Design

PROJECTS

NASA Student Launch at Virginia Tech – Avionics Team

August 2024 - Present

- Collaborated with a team of **30 engineering students** to design, build, and launch a high-powered rocket capable of reaching a designated altitude of **5000 ft** with precision, analyze flight data, while safely deploying and recovering payloads
- Incorporated and programmed dual-deployment altimeters (**RRC3+**, **EasyMini**) using **C** for rocket recovery system
- Integrated and programmed real-time **GPS** and **telemetry** system on a **PCB** using **EasyEDA** and **C++** to enable data exchange between **Elegoo Nano V3** microcontroller, **Adafruit Ultimate GPS Breakout** (real-time location data), and **Digi XBee-PRO XSC** (telemetry transmission) through **UART** providing wireless GPS coordinates to the ground station for real-time monitoring
- Cooperated with interdisciplinary engineering teams on the project, contributing to **milestone meetings**, technical **documentation** and **critical design evaluations** for project tracking and launch readiness

Home Audio Equalizer System

January 2024 - May 2024

- Designed and built a home-audio system with a three-band graphic equalizer system, using **LTSpice** and **Digilent's Waveforms** for **circuit design** and **signal processing**, producing individual **band-pass filters (bass, mid-range, and treble)**, a **class-D amplifier for sampling**, and a **low-pass filter** to produce high-fidelity **audio control** altering sound by boosting or cutting certain frequencies
- Built the system's spectrogram in **C++ language through Arduino IDE**, to demonstrate real-time audio visualization
- Developed **presentations** and **technical documentation**, including **blueprints, calculations, signal graphical analysis** and **testing reports** for project tracking and performance analysis

Embedded System Projects (MSP432P401R and BOOSTXL-EDUMKII BoosterPack)

January 2024 - May 2024

- Designed a **reflex measurer game** in **C language** leveraging **Timer A** for LED flickers, configured **GPIO** and **interrupt-driven inputs** to capture player responses enabling real-time feedback
- Developed **2D subway surfers game** in **C language** utilizing **Timer32** to control obstacles and player movements, used **SPI MOSI** for communication with display module to render game graphics, and configured **GPIO pins** for user inputs
- Established a **multiplayer rock, paper, scissors game** by configuring **UART** and **GPIO pins** in **C language** to emit data exchange between microcontroller and computer using **MobaXterm** software

Versatile Motion Detector System

January 2023 - May 2023

- Collaborated with a team of six to execute an **engineering design project** following the engineering design cycle including problem definition, objective tree, applied metrics to constraints, morph chart, and design alternatives to build a theoretical motion detector
- Developed and presented **CAD models** and **technical drawings** of the final design using **Autodesk Inventor Software**
- Documented the design process in a **technical report** and delivered **presentations**

WORK EXPERIENCE

Northern Virginia Community College

January 2023 - December 2023

Nova Corps Student Intern & Student Ambassador

- Streamlined enrollment processes by guiding students through admissions, registration, advising, and financial aid processes
- Spearheaded comprehensive support initiatives by orchestrating campus tours and information sessions for over **2,000** clients per semester, contributing to a projected **\$6.2 million revenue** in 2023
- Led a team of ambassadors and interns to organize over **30 different events and fairs**, oversee the college's social media platform, and collaborated with the Student Government Association to orchestrate events, **maintaining a retention rate of 57%**

Mathnasium

January 2022 - December 2022

Math Instructor and Tutor

- Delivered weekly structured math lessons (algebra to calculus) to 30 students, resulting in a **15% average increase in test scores** and a **90% student improvement rate**
- Expedited communication with students and parents, adjusting educational strategies, and maintained student and parents' satisfaction rate of **5-star review ratings**