Jacob Shin

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Education

Temple University   2020 - 2024

- Bachelor of Science, Computer Science – College of Science and Technology – Honors Program
- President's Scholar: Covers Full-Tuition ($20,000/yr)
- College of Science and Technology Science Scholar
- Courses: Introduction to Academic Computer Science, Honors Calculus I, Mathematical Concepts in Computing I Honors

Pennsbury High School   (4.65 Weighted GPA)   2016 - 2020

- Academic Excellence in Computer Science – Xerox Award for Innovation and Information Technology

Experience

Princeton Plasma Physics Laboratory (PPPL) Intern   (Fall 2019 - Winter 2019)

- Worked on designing an electronic circuit for measuring properties like density and temperature for electrons

Projects

TI-Authenticator: 2FA on a Calculator   (C, HMAC, SHA1, OTP)

- Provides rolling passcodes similar to Google Authenticator except on a graphing calculator
- Implements One-Time Password (OTP) algorithms for the TI-84+ CE graphing calculator based on RFC 4226 (HOTP) and RFC 6238 (TOTP)

Calculator Controlled RC Boat   (C++, TI-BASIC, Arduino)

- Allows a graphing calculator to wirelessly control a boat
- Utilizes an Arduino and RF wireless modules with a C++ library called ArTICL to interface with a TI-84+ graphing calculator

College Rejection Simulator   (HTML, CSS, Javascript, Bootstrap, Netlify)

- Created a college rejection simulator with fake decision letters and college login portals to help high school seniors mentally prepare for their rejection
- Received 20,000 views within the first few days of the release
- Utilized my previous work from https://github.com/jshin313/preparetoberejected

Wireless LED Marching Band Lights   (C++, Arduino, Group Project)

- Created multi-coloured, music-synchronized lights for the drums and other instruments
- Redesigned an existing prototype by using more cost effective circuity in order to make the project feasible and fundable by the school

Skills

Programming Languages: C, C++, Python, Javascript, x86 ASM
Markup Languages: LaTeX, Markdown, HTML, CSS
Other: Linux, Bash, Git/Github, Tmux, (Neo)vim, Arduino