

EDUCATION

Stony Brook, NY

Stony Brook University

August 2015 - December 2019

- B.S. in Computer Science, completed December 2019
- Dean's list recipient
- Relevant Coursework: Data Structures and Algorithms, Software Engineering, Design Patterns, Algorithm Analysis, Networks, Databases, User Interface Design, Comp. Architecture & Assembly, Machine Learning, Information Theory, Theory of Computation, Statistics, Calculus III, Linear Algebra, Discrete Mathematics, Graph Theory & Combinatorics

TECHNICAL SKILLS

- Languages: Java (Advanced); Experienced: Javascript, SQL, C++, C, Python, SML, MIPS assembly; Familiar: Zsh, Bash, R
- Development: Git & Github, Hibernate, JPA, React, OpenGL & JOGL, HTML, CSS, Bootstrap, JSON, XML, UML sequence and class diagrams, Maven
- Applications: LucidChart, IntelliJ, Eclipse, SourceTree, WireShark, Slack, Trello
- Other: LaTeX, Excel & Google Sheets

PROGRAMMING PROJECTS

- **Majority-Minority Congressional Redistricting | Java, Hibernate, Angular**
 - Full-stack web application used to generate congressional districts to maximize the number of Majority-Minority Districts to combat partisan gerrymandering
 - Created Algorithm Step Framework to modularize Algorithm implementation
 - Implemented Graph Partitioning and Simulated Annealing Algorithm to generate optimized districts
- **Personal Assistant Bot | Java, Twilio Messaging API**
 - Chat bot which automates daily tasks, manages my schedule, and logs task specific data
 - Dynamic IO layer configured with Webhooks
- **pwamsley2015.github.io | React, Bootstrap, JavaScript, HTML & CSS**
 - My personal portfolio website with Sidebar and Banner components, and responsive page navigation
- **[MedCluster.me](https://medcluster.me) | Python, JavaScript**
 - Machine Learning and Data Visualization tool created to shorten emergency response times by optimizing the location of emergency response teams
 - Implemented backend system including k -means clustering algorithm to create optimized groupings from public emergency call data
- **FIRST Robotics Competition (FRC) | Java**
 - Autonomous and teleoperated robot control
 - Implemented PID control and vector-based omni-directional drive train

WORK EXPERIENCE

- **RoboLink** **Summer 2017 & 2018**
 - Contributed to external hardware API built for Drones and Arduino based Robot Kits
 - Taught courses which introduced students to programming in C for external hardware
 - Developed curriculum for advanced programming courses

OTHER SKILLS AND PROJECTS

- Leadership and team experience:
 - Managed team of 30+ students as strategy lead on FRC team 2485
 - Mentored 20+ students in Multithreaded and Object Oriented Programming as a head programmer on FRC team 2485
- Wrote a Game Theory No Limit Texas Hold'em Poker Guide in LaTeX
- Competitive USAPL Powerlifter