Patrick Wamsley

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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 Messing API

- Chat bot which automates daily tasks, manages my schedule, and logs task specific data
- Dynamic IO layer configured with Webhooks
- Personal Portfolio | React, Bootstrap, JavaScript, HTML & CSS
 - My personal portfolio with Sidebar and Banner components, and responsive page navigation
- 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