THOMAS WILDENHAIN

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EDUCATION

Carnegie Mellon University, Pittsburgh, PA

Bachelor of Science, Computer Science. May 2020

QPA: 4.0 • Dean's List all semesters

Bishop Canevin High School, Pittsburgh, PA

Honors: Class of 2016 Valedictorian • National Honor Society President

EXPERIENCE

Microsoft Software Engineer, Designer Team (October 2021 – Present)

Microsoft Software Engineer, AI Platform Team (June 2020 – October 2021)

Capital One Software Engineering Intern (June 2019 – August 2019)

- Created an automated rehydration framework for updating Amazon EC2 instances
- Automated deployment of AWS autoscaling groups (ASG), load balancers (ELB), and cloudformation
- Implemented a blue/green deployment strategy to easily revert back to old infrastructure if updated software failed

Dropbox Software Engineering Intern (May 2018 – August 2018)

- Developed an improvement to the iOS Dropbox Camera Uploads feature
- Wrote C++ logic and frontend Swift/Objective C code

Teaching Assistant, 15-251 Great Theoretical Ideas in Computer Science (August 2017 – May 2018)

- Developed software for scheduling recitations

JavaScript Developer and Robotics Tutorial Writer, BirdBrain Technologies (June 2015 – August 2017)

- Designed, prototyped, and developed a web application to program robotics kits
- Launched the BirdBlox app within a year of starting the project

PROJECTS

Terminal Live Games-Based AI Coding Competition, Team of 3 (March 2019)

- Wrote an AI to compete in tower-defense style competition
- Developed an algorithm to predict and counter enemy attack strategies
- Won first place ($8,000 prize)

Keep Coding and Nobody Explodes, Puzzlehunt CMU (February 2019)

- Created an interactive web-based puzzle for a CS-themed puzzlehunt (http://bit.ly/cspuzzle9)
- Wrote code to automatically solve and generate puzzles (using a dynamic programming algorithm)
- Rated by participants as one of the most fun puzzles in the hunt

Recitation Scheduling Software (August 2017)

- Used the maximum flow matching algorithm to match students and TAs to recitation times
- Experimented with using the Z3 constraint satisfaction library to create schedules
- Provided an interface for visualizing student preferences and available times

ACTIVITIES

CMU Puzzlehunt Co-President and Puzzle Author (August 2016 – present)

- Lead weekly meetings and write puzzles for our bi-annual event that attracts over 200 participants

ScottyLabs (August 2016 – present)

- Developed an Android app using ScottyLabs Print API to enable students to print from their phones
- Gave talks on Web Development and Augmented Reality

SKILLS: Python, TypeScript, C#, C++, JavaScript, Swift, Java, Unity, PowerPoint Turing Machines