







# Preston Locke

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## EDUCATION

**Macalester College, St. Paul, MN**

*Bachelor of Arts Expected May 2022*

*Major:* Computer Science (In-Major GPA: 3.8)

*GPA: 3.7*

*Coursework:* Computer Systems Organization, Theory of Computation, Algorithm Design and Analysis, Software Design and Development, Computer Security and Privacy, Intro to Database Management Systems

## SKILLS

### Programming Languages:

C/C++	JavaScript	Python	Dart
Java	TypeScript	HTML5	CSS
Intel x86 Assembly	PHP	SQL	Bash

### Frameworks and Libraries:

Qt	Flutter Android	Node.js Jest Unit Testing	JQuery
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### Software and Tools:

Linux Makefile	Windows Webpack	Git Firebase	GNU Debugger TravisCI
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## EXPERIENCE

**T.A. - Computer Security & Privacy**, Macalester College, St. Paul, MN

*Sep 2020 - Present*

- Assist students with problem-solving, debugging, and testing code
- Grade and provide constructive feedback for assignments written in C and Python
- Maintain familiarity with common exploits that require knowledge of HTML, PHP, SQL, and JavaScript

**T.A. - Computer Systems Organization**, Macalester College, St. Paul, MN

*Sep 2019 - May 2020*

- Assisted students with problem-solving, debugging, and testing code
- Graded and provide constructive feedback for assignments written in C and Assembly
- Developed Bash and Python scripts used in future assignments

## PROJECTS

### Password Manager

*Feb 2020 - May 2020*

- Used Qt C++ to create a password manager with an auditory mechanism for password strength feedback
- Optimized algorithm for substring checking of entered passwords against popular password dictionaries
- Implemented integrity-checking during the decryption of the password database

### A\* Algorithm Visualization

*Nov 2019 - Dec 2019*

- Used Python to create a cell-based step-by-step visualization of the A\* Algorithm
- Collaborated with group members to implement drawable obstacles and run/clear buttons

### PotLuck

*Sep 2019 - Dec 2019*

- Used Flutter, a Node.js backend, a Firestore NoSQL database, and a JSON-based REST API to create a social ingredient-tracking recipe search app
- Coordinated the Agile development tasks of the team throughout the semester
- Designed an application architecture that left room for redesign, scalability, and future additions