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# Charlotte McGinn

## Education

**University of California, Los Angeles**  
*Expected Graduation June 2020*

- B.S. Computer Engineering, technical breadth in Mechanical Engineering

## Languages

- C++
- C
- Go
- Java
- SQL
- Python
- Matlab
- Verilog

## Tools

- Git
- Bash
- Arduino

## Activities

- Ultimate Frisbee – UCLA Women's Club
- ACM – Hack Committee Officer
- Explore Tech – Panels and Workshops

## Honors

- Rewriting the Code Fellow
- High School UCSD Gordon Fellow
- NCWIT Aspirations in Computing National Runner-Up and San Diego Winner

## Experience

**Tesla | Software Engineering Intern** Jun – Sept 2019  
*Infotainment Vehicle Software Team*  
Palo Alto, CA

- Backend Developer primarily using Go

**RoMeLa | Undergraduate Researcher** Feb 2019 – Present  
*Controls Team*  
Los Angeles, CA

- Developing models in Gazebo Simulator to test the performance of controllers to build more robust robotic systems

**Amazon | Software Engineering Intern** Sept – Dec 2018  
*Alexa Personalization Team*  
Seattle, WA

- Designed and implemented a library in Java that uses the Google Guava Bloom Filter API to index customer data for more efficient lookup by a GDPR/HIPAA compliance system
- Reduced the cost of running the GDPR/HIPAA compliance system by 90%. This system scans 100s of TB of data in S3 to find records to delete

**Microsoft | Software Engineering Intern** Jun – Sept 2018  
*Network Developer eXperience Team*  
Redmond, WA

- Designed and implemented 8 WinRT HttpClient API methods with C++ and COM to enhance the HttpClient experience for Windows Developers
- Projected COM-level implementation code to C++/CX, C#, and JavaScript libraries through IDL (MIDL 3)
- Tested the functionality of these new API methods with automated TAEF-based test code at the ABI level (in C++) and Projection level (in C#)

**Microsoft | Explorer Intern** Jun – Sept 2017  
*Membership, Knowledge, and Growth Team*  
Redmond, WA

- Fetches big data with an SQL and C# based internal scripting language and analyzed data model alignment
- Implemented a client-side interface to render data into graphs

## Projects

**Keyboard HEERO** Nov – Dec 2016

- Wrote an algorithm in Arduino C to take note packages and illuminate the corresponding active notes down some LED strips
- Implemented the ability to have the correct note pitch play aloud at the same time that the associated note is played on the keyboard

**Air Mouse** Oct – Dec 2016

- Built a wireless air mouse with two microcontrollers and radio modules which communicated over the I2C protocol
- Developed code in Arduino C to transmit data packages with mouse position for cursor movement, button clicks, and battery voltage levels