

# Hello, I'm Tom Sloan.

I am a highly driven work-doer, person-leader, and thing-tester who loves to be immersed in the bleeding edge of technology. With my experience as a researcher on the bleeding edge of technology creating technology high impact technology and leading teams to help exceed expectations, I am ready to jump into my next challenge. Learn more on my website: [tom-sloan.com](https://tom-sloan.com)

## Notable Independent Projects:

### Smart Home Internet of Things project application, Independent Project

May 2018 – April 2020, C, C++, Python, CAD, PCB Design, AWS

- Made a Smart Home using a Raspberry Pi using python, and AWS.
- Wrote applications that allow easy control of the IoT devices from an iPhone
- Incorporated Firebase into the iPhone application to provide authentication, storage, and machine learning capabilities
- Designed many CAD models using Fusion 360 for varying applications, including a Smart Home case, a fitness tracker, and molds to make silicone wristbands
- Designed, built, tested, and demonstrated many different devices that could be automated or controlled over Bluetooth and Wi-Fi with easy-to-use applications on both iOS and android operating systems
- Built numerous Internet of Things projects with a wide variety of hardware with and without Arduino using several different sensors and wireless connections methods using C, C++, and python
- Created testing scripts of several projects using C and C++ to ensure the reliability of both the software and hardware designs

See more at: [tom-sloan.com/projects#Smart-Home-Project](https://tom-sloan.com/projects#Smart-Home-Project)

### Smart Band Internet of Things project application, Independent Project

May 2018 – April 2020, C, C++, Python, CAD, PCB Design, AWS

- Designed and built a printed circuit board with a very small footprint for a fitness tracker.
- Wrote software that connect the fitness tracker to the above smart home app, for notifications and various data points to be shared.
- Used a machine learning algorithm (Support Vector Machine) to count steps and to use gestures to control the IoT devices constructed in the above project.
- Designed many CAD models using Fusion 360 for varying applications, molds to make silicone wristbands using silicon epoxy.

See more at: [tom-sloan.com/projects#Smart-Band-Project](https://tom-sloan.com/projects#Smart-Band-Project)

Other projects that are available to see at [tom-sloan.com/projects](https://tom-sloan.com/projects) include:

- Portfolio Website, React, Redux, JavaScript, HTML, Sass
- Twitter Bot, Python

## Work Experience:

**Spectrum Engineering Co-Op** Telesat, Ottawa May 2020 - April 2021

**Researcher** Carleton University, Ottawa May 2018-April 2021

See more at: [tom-sloan.com/experience](https://tom-sloan.com/experience)

## Technical Experience:

Python	C	Java	JavaScript	React	HTML5
CSS3	MATLAB	Swift	NodeJS	PCB Design	Github
Sass	Altium	Arduino	A more comprehensive list is at <a href="https://tom-sloan.com">tom-sloan.com</a>		

## Contact

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GPA: 3.7  
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## Education

Fall 2017 – Fall 2021

**Carleton University**

B.S. in Computer Systems  
Engineering  
GPA: 3.7

## Teamwork

Team Lead of a 4<sup>th</sup> Year  
Project titled *Smart Pillbox for Persons with Dementia*.

Report can be found at [tom-sloan.com/projects#Smart-](https://tom-sloan.com/projects#Smart-deep-space-sparkle)

Team Lead of 4th year group  
project titled *Project Deep Space Sparkle*.

Report can be found at [tom-sloan.com/projects#project-deep-space-sparkle](https://tom-sloan.com/projects#project-deep-space-sparkle)

## Notable Awards:

- Natural Sciences and Engineering Research Council of Canada Undergraduate Student Research Award (\$6735)
- A. Davidson Dunton Scholarship (\$8000)
- Carleton Engineering Faculty and Design Scholarship (\$1000)

## Hobbies:

- AWS Cloud Practitioner
- Black Belt in Karate
- Completed Canadian Securities Course
- Grade 7 Royal Conservatory of Music for piano
- Aquafitness Instructor June 2016 – Dec 2017
- Lifeguard and Swimming Instructor May 2015 – Dec 2017