

# Samuel Mercier

✉ smercier@purdue.edu • 🌐 samercier.com • 🌐 samontea

## Education

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### Purdue University (College of Science, Honors College)

*B.S. in Mathematics, Minor: Computer Science, Philosophy*

*Relevant Course Work* CS 381 *Intro to Algorithm Analysis*, CS 252 *Systems Programming*, STAT 416 *Probability*, MA 454 *Galois Theory*, MA 572 *Algebraic Topology*, MA 553 *Algebra*

**Awards:** Purdue Presidential Scholarship & Purdue Marquis Scholarship

**Honors:** Dean's List

The Outstanding Senior Mathematics Major

**West Lafayette, IN**

*December 2019*

*Fall 2015–Present*

*5 of 6 semesters*

*Spring 2019*

## Technical Experience

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*Programming Languages/Frameworks*

o Proficient: C/C++ & JavaScript

o Familiar: Elixir, Emacs Lisp, Java, Python, & Ruby

## Work Experience – Software Engineering

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### Software Engineer Intern MongoDB – Query Team

*May 2018–August 2018 & May 2019–August 2019*

Working on the query language & database management system. Implemented part of a new index type. Will return in summer 2019.

*Technologies:* C++, Python (for testing), & JavaScript (for testing).

### Software Engineer Intern MongoDB – Monitoring Team

*May 2017–August 2017*

Researched and implemented time series analysis techniques for anomaly detection for their “DaaS” platform. Integrated into existing alerts framework to create automated anomaly detection alerts.

*Technologies:* Java & MongoDB.

### Web Development Intern in Support of NASA Systems Engineering NASA JSC

*January 2017–May 2017*

Developed requirement management software used throughout NASA.

*Technologies:* JavaScript, Node, Angular 1.x, Brunch, & Redux.

### Software Engineer Intern Fullstack Springbuk

*June 2016–August 2016*

As an intern project, led development on an onboarding application for new customers. Worked as a normal software engineer on their Rails web application. Improved frontend/backend communication.

*Technologies:* PostgreSQL with ActiveRecord as a wrapper, Ruby, Ruby on Rails, & JQuery.

## Work Experience – Teaching

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### MA 161/162 Undergraduate Teaching Assistant

*August 2018–Present*

Answer questions with students in “flipped classroom” for MA 161/162 (Calculus I/II).

### CS 252 Undergraduate Teaching Assistant

*January 2018–May 2018 & August 2018–Present*

Assist in teaching CS 252 *Systems Programming* in weekly lab classes & preparing materials (labs, exams, etc.)

### CS 240 Undergraduate Teaching Assistant

*January 2016–May 2016 & August 2016–December 2016*

Assist in teaching CS 240 *Programming in C* in weekly lab classes & preparing materials (labs, exams, etc.)

### CS USB Help Room Tutor

*September 2015–December 2015*

Tutored in CS 180 *Object-Oriented Programming* & CS 240 *Programming in C*.

## Other Experience

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### BoilerMake Hackathon Executive Board (Dev & User Experience Team)

*January 2016–October 2018*

Helped plan and organize anything relating to resources/services for the event participants. Made a small NodeJS application with a bunch of puzzles. <https://github.com/BoilerMake/puzzles-BM4>

### Purdue FIRST Programs (IT Team)

*August 2015–December 2016*

IT Director

*May 2016–December 2016*

Led development of a home brewed content management system. *Technologies:* Elixir, Phoenix, React, & Redux.