

# ETHAN MCCARTHY

 [ethmcc.github.io](https://ethmcc.github.io)


 [in/ethmcc](https://in/ethmcc)

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## EMPLOYMENT

### Lead Software Engineer

● Bill360

 2022 – current


 Tampa, Florida


Led the design, architecture, development and maintenance of large, scalable software systems providing payments services.

C# .net TypeScript JavaScript Node.js Vue  
MongoDB Docker Terraform AWS Lambda Agile  
Azure DevOps CI/CD Unit Testing Acceptance Testing

### Senior Software Developer

🐟 Two Fish Creative

 2021 – 2022

 West Palm Beach, Florida

Team lead on development of a large, full-stack, enterprise operational web platform in the medical billing space.

Python TypeScript JavaScript Node.js Flask Vue  
Redis MySQL Docker AWS Lambda ElastiCache  
RESTful APIs Pytest Linux Bash GitHub CI/CD

### Software Engineer

🚴 Skillion Inc.

 2020 – 2021

 Bethlehem, Pennsylvania

Led development of a mobile software product for an e-bike platform. Developed full-stack web and Android applications for an e-bike platform.

Java Android TypeScript JavaScript C++ React  
AWS IoT JUnit OpenCV Automated Testing GCP  
Google Maps Platform Machine Learning

### Visiting Assistant Professor

🎓 University of Florida

 2018 – 2020

 Gainesville, Florida

Published original research in computer science and symbolic logic. Led research seminars and conferences. Developed online courses utilizing multimedia lectures, custom interactive software teaching tools, and custom digital textbooks.

TypeScript JavaScript Node.js MATLAB React

## PERSONAL PROJECTS

I enjoy working on side-projects. You can find write-ups on my programming blog: <https://ethmcc.github.io/projects/>. These include:

- Open-source contribution to an AAC assistive device
- Progressive web application built with React for math/CS education
- Python library for efficiently solving combinatorial problems
- Native Android Application written in Java
- Hardware pomodoro timer built on the Arduino platform with C++

## EDUCATION

### Ph.D. Mathematics

UW–Madison

 2018

 Madison, Wisconsin

Computer science, computability and complexity, algorithmic information theory (Ph.D. 2018, M.A. 2014)

## TECHNICAL SKILLS

C# Java Python TypeScript  
Node.js JavaScript C++ .net  
Vue React SQL NoSQL  
MongoDB Redis MySQL Jira  
Azure DevOps CI/CD Terraform  
Docker AWS GCP OOP  
Automated Testing Unit Testing  
Integration Testing




## OTHER HIGHLIGHTS

- Taught Python-based programming courses at *Art of Problem Solving* to talented high school students. (2014–2018)
- Awarded NSF Graduate Research Fellowship, 2014.

## SELECTED PUBLICATIONS

- *Pointwise complexity of the derivative of a computable function*. Arch. Math. Log. (2021). DOI: f7ms
- *Cototal enumeration degrees and their applications to effective mathematics*. Proc. Am. Math. Soc. 146 (2018). DOI: f7mt

## OTHER INTERESTS

-  Collegiate Sailing Instructor.
-  Snorkeling enthusiast.
-  Pickleball beginner.