

ETHAN MCCARTHY

 ethmcc.github.io


 in/ethmcc


 ethmcc

EMPLOYMENT

Senior Software Developer

 **Two Fish Creative**

 2021 – present

 West Palm Beach, Florida

Built full-stack enterprise web applications for clients managing hundreds of millions of dollars in accounts. Worked intensely in an Agile development environment as team lead on a green-tech software project. Mentored and led other developers. Interacted directly with clients to understand needs and deliver on business goals.

Python Flask Vue Redis MySQL Docker Pandas
AWS Elastic Beanstalk ElastiCache RDS Lambda ECS
RESTful API design Agile development Pytest Linux Bash
Microsoft SQL Server PowerShell GitHub CI/CD

Software Engineer

 **Skillion Inc.**

 2020 – 2021

 Bethlehem, Pennsylvania

Developed full-stack Android applications and web apps for an e-bike platform. Led development of “Tours” project.

Java Android React AWS IoT Google Cloud Platform
Google Maps Platform JUnit testing Machine Learning
OpenCV C++ Scrum

Visiting Assistant Professor

University of Florida

 2018 – 2020

 Gainesville, Florida

Published original research in computer science and symbolic logic. Led research seminars and conferences. Converted courses to online-delivery. Developed video sequences, programmed interactive online teaching tools, and contributed to digital textbooks.

Graduate Teaching Assistant **University of Wisconsin–Madison**

 2012 – 2018

 Madison, Wisconsin

Led recitations in undergraduate mathematics courses. Developed curriculum content. Led and trained other teaching assistants.

Undergraduate Teaching Assistant **Michigan State University**

 2010-2012

 East Lansing, Michigan

Led the recitation sections for a terminal undergraduate math course. Assisted in tutoring center.

PERSONAL PROJECTS

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

- A native Android Application written in Java
- A physical pomodoro timer built on the Arduino platform with C++
- A progressive web application built with React for teaching students about Turing machines
- A Python library for efficiently solving combinatorial problems

EDUCATION

Ph.D. Mathematics

UW–Madison

 2018

 Madison, Wisconsin

Theory of computation, computer science, computability and complexity, algorithmic information theory and randomness.

M.A. Mathematics

UW–Madison









 2014

 Madison, Wisconsin

OTHER EXPERIENCE

- *Art of Problem Solving*. Teaching coding to talented high school students. *Intro to Programming with Python*, *Intermediate Programming with Python*.

TECHNICAL SKILLS

 Python  JavaScript  Java
C++ C Ruby MATLAB Numpy
Testing Agile Methodologies  Jira
 Android  Vue  React
 AWS IoT SQL Redis
Computer Science OOP
Functional Programming Algorithms


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

SELECTED AWARDS

- Graduate Research Fellowship, NSF, 2014
- Herbert T. Graham Scholar, 2011 & 2012
- Math in Moscow Scholarship, AMS, 2012
- Herzog Mathematical Competition, 1st Prize, 2011

OTHER INTERESTS

-  **Sailing:** Instructor at UW Hoofers student sailing program.