ETHAN MCCARTHY

🔗 ethmcc.github.io   in/ethmcc   ethmcc

💼 EMPLOYMENT

Product Engineer   ● Bill360
📅 2022 – current   📍 Tampa, Florida

Leading development on small, cross-functional teams at a green tech startup in the FinTech sector.

`C#` `.net` `Vue` `MongoDB` `Docker` `Terraform` `AWS Lambda` `Scrum` `Azure DevOps` `CI/CD` `Trunk-based Development` `Unit Testing` `Acceptance Testing`

Software Developer   🐟 Two Fish Creative
📅 2021 – 2022   📍 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` `JUnit` `OpenCV` `C++` `Scrum` `Google Cloud Platform` `Google Maps Platform` `Machine Learning` `Automated Testing`

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, interactive software teaching tools, and digital textbooks.

📄 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 hardware pomodoro timer built on the Arduino platform with C++
- A progressive web application built with React for math/CS education
- A Python library for efficiently solving combinatorial problems

🎓 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` `C++` `C` `Ruby` `.net` `Flask` `Rails` `JavaScript` `Vue` `React` `MATLAB` `Numpy` `SQL` `NoSQL` `MongoDB` `Redis` `MySQL` `Pandas` `Pytest` `Linux` `Bash` `PowerShell` `Jira` `Azure DevOps` `CI/CD` `Terraform` `Docker` `AWS` `GCP` `OOP` `Agile Methods` `Scrum` `Automated Testing` `Machine Learning`

🏃 OTHER EXPERIENCE

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

📑 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 Competition, 1st Prize, 2011

🤸 OTHER INTERESTS

- ⚓ **Sailing Instructor** at collegiate sailing club.
- 〰 **Freediving** enthusiast.
- 🏓 **Pickleball** novice.