# THOMAS GRAHAM FISHER II

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#### **EDUCATION**

#### University of Notre Dame (Notre Dame, IN)

Bachelor of Science, Computer Science and Honors Mathematics

# May 2022

## GPA: 3.99

#### SOFTWARE EXPERIENCE

### Site Reliability Engineer Intern - Reconstruct

Jan 2021 - May 2021

- · Analyzed potential advantages and risks associated with using AWS EC2 reserved and spot instances based on historical usage data. Presentation prompted plans for system re-architecture to support using spot instances.
- · Built a Gitlab CI/CD Pipeline which tests, packages, and deploys AWS Lambda function code (Bash, Docker, Gitlab)
- · Automated generation of a monthly cloud billing spreadsheet via AWS Lambda (Python, AWS, Google Sheets)
- · Automated submission of EC2 vCPU Quota increase requests as needed via AWS Lambda (Python, AWS, pytest)

### Technology Development Program Intern - Optum

Jun 2020 - Aug 2020

- · In team of 4 interns, built performance testing framework to load test REST services (Scala, Gatling, Mayen)
- · Containerized app components and deployed into on-premises Kubernetes cluster via Helm (Kubernetes, Helm)
- · Automated creation of dashboard report to analyze results and drive development (InfluxDB, Grafana, Jenkins)

## Learning Management Systems Developer - Notre Dame Office of IT

Sep 2019 - Present

- · Refactored previous students' D3.js based web app added more consistency in 500 fewer lines (JavaScript)
- · Created macOS app to concatenate PDFs to streamline Professor's grading process (AppleScript)
- · Currently preparing previous students' economics simulation for classroom use (PHP, JS, SQL)

### Computational Methods for Discovery Driven by Big Data REU

Jun 2019 - Aug 2019

- · Implemented a novel redirected walking algorithm to allow efficient and natural virtual locomotion in complex physical environments. Processed data in Python; imported and used result in C# algorithms for Unity
- Worked in the Illusioneering Lab at the University of Minnesota under the direction of Evan Suma Rosenberg
- · Completed "Big Data Bootcamp" using materials from the Fall 2016 Data 8 course at UC Berkeley (Python)

#### Modularization Project Lead - Robotic Football Club

Sep 2018 - Aug 2020

- · Collaborated with fellow engineers to design, build, program, and repair more than a dozen robots to play football; robots are controlled by club members in a game very similar to American football
- · Lead team of 15 to organize and enforce best programming practices on existing robot drive code (Python)

### OTHER EXPERIENCE

## Math Grader and Math Bunker Head Tutor - Notre Dame Math Department

Aug 2020 - Present

- · Lead (and tutor in) the "math bunker," a student-run help room dedicated to proof-based math classes
- · Grade assignments for Honors Calculus classes, which build single- and multi-variable calculus from first principles

#### Senior Event Assistant - Notre Dame Student Activities Office

Sep 2018 - Present

- · Prepare and disassemble various venues for student events around campus
- · Monitor ongoing student events for audiences up to hundreds of students and ensure their smooth course
- · Coordinate shifts, lead small group of 7 coworkers, and serve as first contact for any issues during events

#### **SERVICE**

Weekly Tutoring at St. Adalbert's Elementary School

Sep 2018 - Present

Northside Ministries Food Pantry and Community Garden Volunteering (200 hours)

Apr 2017 - Apr 2018

#### TECHNICAL SKILLS

Proficient: Python, Java, C, LaTeX, Bash, Docker, JavaScript, PHP, SQL

Basic: C++, AWS, Gitlab, Clojure, Scala, Gatling, Kubernetes, Helm, Jenkins, Arduino, MATLAB, Verilog

#### HONORS

Upsilon Pi Epsilon Computing and Information Honor Society Member Tau Beta Pi Engineering Honor Society Member (Indiana Gamma Chapter) Inducted Mar 2021 Inducted Nov 2020

Mar 2019

Honorable Mention - 2019 Hesburgh Libraries Hackathon Virginia A. Smith Highest Academic Award (Valedictorian Equivalent)

May 2018