

Ethan Gahm

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Github: <https://github.com/EthanGahm>
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Portfolio: <https://ethangahm.github.io/>

EDUCATION

University of Virginia
School of Engineering and Applied Science
Charlottesville, VA

B.S. in Computer Science (expected May 2023)
Current GPA: 3.9

Newton North High School
Newton, MA

Graduated May 2019
GPA (weighted): 4.9

SKILLS

Programming Languages

Proficient: Python | Javascript | C++ | Java | Processing | SQL | HTML
Some experience: C | MatLab | LaTeX | Bash | Make | CSS

Other Technologies

Proficient: Git/GitHub | React.js | Node.js | Express | MongoDB | MySQL | PostgreSQL | Socket.io | AWS Services: Lambda, EC2, RDS, DMS, Cloudwatch, Elastic Beanstalk, Code Pipeline | Google App Script | Linux | Windows
Some experience: OpenCV | Python Pandas Library | GraphQL | Apollo

EXPERIENCE

Software Developer | UVA Development Hub

July 2021 – present

- Manage MySQL database hosted on an AWS Relational Database Service instance
- Deploy and maintain serverless REST APIs through AWS API Gateway and Lambda

Software Development Group Lead | UVA Development Hub

May – July 2021

- Supervised a team of four summer interns
- In eight weeks, produced a full-stack web application utilizing Javascript, React.js, Node.js, Express, Python, MongoDB, and Google APIs
- Wrote and debugged code, ran weekly meetings, assigned tasks, and taught new technologies and concepts

Software Development Intern | UVA Development Hub

Feb – May 2021

- Performed data analysis and visualization for an NIH-funded research project on pain responses in cancer patients
- Managed a MySQL database
- Wrote Python scripts run with AWS Lambda
- Visualized data trends in Grafana
- Conceived and successfully developed a means of programmatically creating and updating “summary tables” for faster processing and visualization of large data volumes

- Teaching Assistant, Theory of Computation** | Dept. of Computer Science, UVA Feb – May 2021
- Led discussion of theoretical computer science concepts at weekly cohort meetings
 - Assessed students based on participation and understanding of course material
 - Graded written homework assignments
- Teaching Assistant, Introduction to Programming** | Dept. of Computer Science, UVA Feb – May 2021
- Ran lab sections, held office hours, and graded homework for course taught in Python
- Course Instructor, The Circle Project** | UVA Center for Diversity in Engineering May – July 2020
- Conceived, designed, and taught a week-long online course on introductory game theory for two cohorts of 7th and 8th grade students
 - Built tools for interactive simulations and games with students
 - Wrote 20 pages of lesson plans and taught 30 hours of online classes
- Volunteer Test Writer and Proctor** | Virginia Science Olympiad 2019, 2020, and 2021
- Wrote regional and state-level exams for middle and high school competitors at Virginia Science Olympiad
 - Proctored examinations
- Grader, Math and Computer Science** | Art of Problem Solving, Inc. | Cambridge, MA Aug 2019 – Dec 2021
- Graded student homework for introductory math and computer science courses
- Dockstaff** | Community Boating, Inc. | Cambridge, MA June 2018 – Aug 2019
- Taught beginner sailing classes to adults
 - Helped to manage and maintain sailboat fleet

PROJECTS

- Salary Data Analysis Tool**
May – July 2021
[Live Website](#) | [Project Overview](#)
- Full-stack web application which can be used to analyze and explore data from the 2021 AskAManager.org salary survey
 - Made with MongoDB, Express, React.js, Node.js, Material UI, and several of Google's APIs
 - Built alongside a team of four interns as part of the UVA Development Hub's summer internship program
- Multiplayer Geography Quiz Game**
June – July 2021
[Live Website](#) | [Project Overview](#) | [GitHub](#)
- Full-stack web-based game where players can test their geography knowledge against each other
 - Built with React.js, Socket.io, Node.js, Express, and several of Google's APIs
- Neuroevolution-based Driving A.I.**
Feb 2020
[Project Overview](#) | [GitHub](#)
- Used an evolutionary algorithm to teach a car to navigate a curving track while avoiding walls
 - Built on top of a fixed topology neural network built from scratch
 - Written in Processing 3
- Map-Based Youtube Video Finder**
June 2021
[Live Website](#) | [Project Overview](#) | [GitHub](#)
- Simple web application which allows a user to pick any point on the Earth's surface and find the highest-viewed YouTube video geotagged nearby.
 - Built with React.js and several of Google's APIs

Table Tennis Rating Tracker Feb 2020 – present Version 1 Overview Version 2 Overview GitHub	<ul style="list-style-type: none"> ➤ Developed a system to record match results and track elo ratings over time ➤ System updates and displays detailed statistics for individual players ➤ Includes intuitive user interface. Written in Google App Script (JavaScript) in conjunction with Google Sheets. ➤ Third iteration of the project, built as a full-stack web application, currently in progress
"Improving Video Calls: Background Privacy and Facial Recognition" July – Aug 2017	<ul style="list-style-type: none"> ➤ Culminating project for Summer Computer Science Institute at Carleton College in Northfield, MN (Summer 2017) ➤ Using python and the Open-CV library, built a facial-recognition and background-privacy system for video calls
Word Search Solver November 2020	<ul style="list-style-type: none"> ➤ Automated word-search solver leveraging a self-designed and built hashing algorithm. ➤ Written in C++

COURSEWORK

In Progress

Computer Architecture
Algorithms
Advanced Software Development
Statistics
Introduction to Cyber Security

Completed

Theory of Computation
Program and Data Representation
Software Development Methods
Introduction to Programming
Discrete Math
Digital Logic Design
Linear Algebra
Multivariable Calculus
Single Variable Calculus
APMA 3100: Probability
Introduction to Engineering

ACTIVITIES

Resident Adviser, Brown Residential College	Aug 2021 – present
Club Table Tennis at UVA Vice President	August 2019 – present
UVA Outdoors Club	August 2019 – present
Newton North High School Science Team President	September 2015 – June 2019
Newton North High School Sailing Team Co-captain	April 2017 – May 2019