

# Luke Moenning

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## EDUCATION

### The University of Iowa

Anticipated May 2025

*Bachelor of Science Computer Science, Bachelor of Science Mathematics - GPA 3.67*

*Iowa City, IA*

- Artificial Intelligence, Modeling, and Simulation Certificate + Psychology Minor
- Courses: Data Structures, Algorithms, Artificial Intelligence, Computer Organization, Networks, Numerical Methods, Optimization

## EXPERIENCE

### GoDaddy | Python, TypeScript, AWS, PySpark, React.js

June 2024 - August 2024

*Software Engineer Intern*

*Seattle, WA*

- Increased the speed of new metric onboarding for the experimentation platform by **4x** by adding a query validation feature
- Reduced AWS costs by **73%** by optimizing Step Function executions running Spark queries
- Improved integration by designing and implementing enhancements to streamline the project's integration with **2** adjacent projects

### Sage Bionetworks | Java, SQL, AWS

January 2024 - May 2024

*Software Engineer Intern*

*Seattle, WA*

- Reduced data latency for the Synapse data platform from an average of **60 minutes** to **200 milliseconds** for a team of **20+** researchers by designing and implementing a real-time notification system using webhooks
- Developed an algorithm utilizing AWS SQS to process and distribute batches of **1,000,000+** simultaneous notifications
- Created APIs for webhook registrations and additional data validation services for **100k+** monthly users
- Enhanced MySQL performance by developing an algorithm to parse SQL statements and optimize memory allocation by **28%**

### HawCHI Lab | JavaScript, Node.js, Python, AWS, DynamoDB

January 2023 - December 2023

*Undergraduate Researcher*

*Iowa City, IA*

- Improved executive skills in **16** preschools and special education classrooms by developing a full-stack learning management system allowing educators to track, reflect on, and analyze cumulative student progress
- Provided custom progress tracking features by converting **2** complex Qualtrics surveys to be natively integrated using JavaScript
- Efficiently handled classroom data by building back-end APIs and databases with Node.js, Python, AWS, and DynamoDB

### W.R. Berkley Corporation | React.js, GraphQL, TypeScript

May 2023 - August 2023

*Software Engineer Intern*

*Urbandale, IA*

- Developed support for quoting Monoline General Liability policies for the launch of a micro React.js insurance portal
- Built GraphQL services and resolvers to enhance client-side data representation and error handling
- Accelerated development time for **70+** engineers by rewriting **50+** test files to remove a slow and deprecated library

## LEADERSHIP EXPERIENCE

### Association for Computing Machinery (ACM)

December 2023 - May 2024

*Secretary and Treasurer*

*Iowa City, IA*

- Organized and facilitated weekly club meetings with **30+** members, managing a budget of **\$15,000**
- Co-orchestrated UICC, ACM's annual computing conference with **100-200** attendees

### Mathnasium - The Math Learning Center

June 2019 - December 2022

*Lead Instructor*

*Iowa City, IA*

- Streamlined teaching provided by leading instructional training sessions for a staff of **10+** instructors
- Provided individualized instruction to **100+** students, ranging from kindergarten to Calculus

## PROJECTS

### SolarViz | Python, Streamlit, Docker

September 2023

- Identified **3** faulty points in Iowa City solar panel arrays by building a data analysis and visualization platform using Python
- Managed development and deployment across a team of 4 by containerizing the project utilizing Docker

### EduQuest | React.js, GraphQL, AWS, DynamoDB, OpenAI API

July 2023

- Won **2nd** place YouthCodeX 2023 by creating a learning platform for children utilizing AI for problem generation and tutoring
- Implemented GraphQL APIs to handle CRUD operations on user and problem data stored in DynamoDB

## SKILLS

- **Languages:** Java, Python, JavaScript
- **Libraries and Frameworks:** React.js, TypeScript, Next.js, Node.js, PySpark, Spring, Jest, JUnit
- **Tools:** GraphQL, Amazon Web Services (AWS), SQL, MySQL, DynamoDB, Docker, Kubernetes, Git, Jenkins, Maven, Linux