Luke Moenning

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EDUCATION

The University of Iowa Anticipated May 2025

Bachelor of Science Computer Science, Bachelor of Science Mathematics — *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, SQL* — June 2024 - August 2024

Software Engineer Intern — *Seattle, WA*

- Increased the speed of new metric onboarding for the experimentation platform by **4x** by releasing a query validation feature
- Built out supporting Python endpoints, integrated AWS IAM authentication through custom policies, and delivered a new Next.js page on the platform to enhance user interaction and feature accessibility, committing code across **4** repositories
- Designed and implemented enhancements to the feature's query runner backbone to streamline integration with **2** adjacent projects
- Achieved a **73%** reduction in AWS costs by optimizing Spark queries integrated with EMR and Step Function workflows

Sage Bionetworks | *Java, AWS, SQL* — 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 Story Carnival, a full-stack learning management system (LMS) that allows educators to track, reflect on, and analyze cumulative student progress
- Researched **12** LMSs and **5** learning standards, including Head Start and NAEYC, to align the tool's design with best practices
- Gathered feedback from educators by demoing a prototype of the tool, incorporating suggestions to improve user experience
- Converted **2** convoluted Qualtrics surveys into a simple, custom solution using SurveyJS, improving project maintainability and UX

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 with the launch of a React.js internal 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