Robert Klock

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EDUCATION

OBERLIN COLLEGE

BA in Computer Science
May 2021 | Oberlin, OH
GPA: 3.6 / 4.0

LINKS

github.com/RobKlock
linkedin.com/in/robert-klock
cs.oberlin.edu/~rklock

COURSEWORK

UNDERGRADUATE

Research in Computer Science
Research in Machine Learning
Linear Optimization
Systems Engineering
Linear Algebra
Mathematical Modeling
Programming Abstractions
Web Development
Data Structures
(Teaching Assistant 4x)
(Student Tutor 5x)
Theory of Computation
Computer Architecture
Python Programming
(Student Tutor 5x)

SKILLS

LANGUAGES:

Java • Python • C • Shell • Javascript • NetLogo • Ruby

FRAMEWORKS AND TOOLS:

Node.js • Rails • MongoDB • PyTorch • NumPy • TensorFlow • R • git • CI/CD with GitLab / GitHub • LaTeX • SciKit-Learn • Ruby on Jets • AWS

OTHER

- United States Citizen
- Proficient in French
- Pianist for 16 years

EXPERIENCE

ARIST | Software Engineer

June 2020 - Present | Remote

- Current Responsibilities:
  - Utilizing test-driven development to build critical components of the ground-up rebuild of Arist as we move into a new Ruby on Jets stack.
  - Leading the development of machine learning projects including regression models to identify text messages susceptible to carrier-blocking.
- Prior Work:
  - Collaborated with our CTO to design an improved data model to increase the efficiency and capabilities of our back end.
  - Built and shipped GPT-3 powered models for content conversion. This cut down time to convert a client's course material by 80%.
  - Developed highly requested features for users including course cloning, ability to download course data, and Arist's Zapier integration.
  - Led the development of Arist's content moderator to detect platform misuse.

OBERLIN COLLEGE | Oberlin Workshop and Learning Sessions (OWLS) Leader

January 2019 – Present | Oberlin, OH

- Developed and led the OWLS sessions for our Data Structures in Java course.
- Crafted and adapted thought-provoking exercises for students to foster their understanding of Data Structures and Java.

RESEARCH

NEUROSCIENCE DEPARTMENT | Artificial Intelligence Researcher

August 2020 – Present | Oberlin, OH

- Built evidence-accumulating circuits in Python which utilize perceptrons and threshold latch neurons to improve classification of noisy data with **Dr. Patrick Simen**. This increased a perceptron's accuracy on the **sonar mines dataset** two-fold.
- Using Python to develop timer models. I demonstrated that a model can be used to keep track of multiple subsequent intervals of time for any task.

COMPUTER SCIENCE DEPARTMENT | Computer Science Researcher

July 2020 – Present | Oberlin, OH

- Investigating the frequency of insecure SQL code on Stack Overflow.
- Developed multiple models (Linear SVM, Decision Trees, Random Forest, Deep Neural Networks) to classify insecure code snippets. This will be used a bot that automatically comments to warn and educate users of injection vulnerabilities in their code.
- Advised by **Dr. Cynthia Taylor**

AWARDS AND RECOGNITION

2018 3824/4623 William Lowell Putnam Mathematical Competition
2017 Illinois BioGENEius Semifinalist | Oak Park, IL