Miles Bronson

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EDUCATION

UNIVERSITY OF MICHIGAN

BSE in Computer Science
BSE in Physics
2020-2024 | Ann Arbor, MI
College of Engineering
Cum. GPA: 3.81 / 4.0
C.S. GPA 3.83 / 4.0
Physics GPA: 3.92 / 4.0

COURSEWORK

COMPUTER SCIENCE

Machine Learning
Data Structures and Algorithms
Web Security
Full Stack Development
Computer Organization
Advanced Algorithm Design
Autonomous Robotics

PHYSICS

Thermodynamics
E and M
Newtonian Mechanics
Statistical Mechanics
Introduction to Quantum Mechanics

LINKS

Github:// **milesbronson**
LinkedIn:// **miles-bronson**

SKILLS

PROGRAMMING

Languages
Ruby/Ruby on Rails • Java • C++ •
Python • Bash • Javascript • Go •
Java Spring-Boot •
SQL • Matlab • Assembly
Tools
Postgres • MySQL • Docker •
Snowflake • Redis • Kafka •
Autodesk
Libraries
Pytorch • TensorFlow • Jinja •
Numpy • Scikit-Learn • Ember

EXTRA-CURRICULAR

Bored Club Founder
Girls in STEM Volunteer
Guitarist
Coin Magician
Climber
Gym Enthusiast
Fencer

EXPERIENCE

HASHICORP | Software Engineering Intern
May 2023 – Aug 2023 | Remote
- Led initiative to track Hashicorp business objectives by creating a program to track users flow through the Terraform Cloud service.
- Optimized Terraform Cloud billing using Ruby and SQL resulting in 5 times faster billing and in the process caught major billing bugs.
- Trained and tuned LLM to solve Terraform configuration issues.
- Worked as full member of team once summer project was completed.
- Created easy to follow documentation for all above initiatives.

BANDWIDTH | Software Engineering Intern
May 2022 – Aug 2022 | Denver, CO
- Created Restful API to access call analytic information after working with customers to identify needs.
- Designed test suite with JUnit for analytic API and 2 other API endpoints.
- Parallelized tests for our team resulting in tests running 7 times faster, utilizing knowledge of AWS and JUnit for testing.
- Led study on the book Designing Data Intensive Applications to team members.

AUTO-BOOKS | Software Engineering Intern
May 2021 – Aug 2021 | Detroit, MI
- Generated .NET and SQL unit and integration tests.
- Spearheaded internal tool on-boarding of all new customers.
- Optimized SQL search queries resulting in customer data retrieval 10 times faster.

RESEARCH

MICHIGAN BIPED ROBOTICS LAB | Researcher
November 2021 – Present | Ann Arbor, MI
- Mentored underclassmen and communicated basic kinematics of a bipedal robot.
- Programmed biped robot with reinforcement learning to navigate uneven terrain, stairs, and tight spaces.

PROJECTS

WORDLE BOT
- Utilized machine learning to solve a daily wordle, most solved on 3rd guess.
- memoization, decision trees, Bayesian statistics

INSTAGRAM AND GOOGLE CLONE
- Full Stack Instagram Clone, with front-end, API, and database layer.
- Jinja, SQLite, Flask

N-BODY SIMULATOR
- Used python to simulate a n different bodies under the influence of each others gravity, using a leapfrog step algorithm.
- numpy

VOLUNTEER

DURANGO CHESS | 501c-3 Founder
Feb 2016 – Present | Durango, CO
- Co-founded a 501c-3 to mentor over 300 elementary students in chess.
- Annually raise $10,000 to provide students with chess materials.