

# Jake Vossen

COLORADO SCHOOL OF MINES CLASS OF 2022, B.S. COMPUTER SCIENCE

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*"Programs must be written for people to read, and only incidentally for machines to execute" – SICP*

## Education

### Colorado School of Mines

Golden, Colorado

M.S. COMPUTER SCIENCE

January 2021 - December 2022

• Enrolled Courses: Advanced Computer Architecture

B.S. COMPUTER SCIENCE, MINOR IN ECONOMICS

August 2018 - December 2021

- Major GPA: 3.97 || Overall GPA: 3.55
- 2020 (Transamerica) & 2019 (BP) C-MAPP Scholar - An award to recognize top CS students who are active and involved within the CS department
- Relevant courses in Computer Science
  - Completed Courses: Data Structures (C++), Advanced Software Engineering, Software Engineering (Java), Database Management, Compiler Design (Rust), Introduction to Linux, Introduction to Computer Science (Python)
  - Enrolled Courses: Operating Systems, Elements of Computing Systems
- Relevant courses in Economics
  - Completed: Energy Economics, Intermediate Microeconomics, Property Rights and Natural Resources
  - Enrolled: Economics of Water
- Study abroad: Kenya 2019 - Prepared and taught lessons on Arduinos and 3D modeling to middle school and high school aged youth and conducted entrepreneurial self-efficacy and market research

## Skills

- **Programming Languages**
  - **Advanced:** Python, Java, Rust
  - **Intermediate:** C++, SQL, TypeScript
  - **Beginner:** Haskell, Swift, OCaml
- **Development Tools**
  - Deployment Tools: AWS, Docker, Linux Server Maintenance & Management
  - Other Tools: Git, GitHub, Bash, LaTeX, GNU Make
- **Team Skills & Leadership:** Agile Scrum team member, U-CLIMB Lead Mentor for Intro to Computer Science (see Experience), Eagle Scout
- **Certifications:** Associate Amazon Web Services Solution's Architect (2018-2021)

## Experience

### Nextworld LLC

Denver Tech Center

ASSOCIATE SOFTWARE ENGINEER

Summer 2018, 2019, 2020

Three summers of full time software development with backend Java and frontend Angular. My code was deployed bi-weekly, reviewed by stakeholders, and delivered to customers. I was involved in large GitHub projects that utilized advanced GitHub functionality such as code reviews and CI/CD. Nextworld used Agile Scrum methodologies, and I took part in sprint planning, retrospectives, and backlog grooming.

- Full stack developer (Summer 2020)
  - Developed Java REST API code to generate reports using Nextworld data, which included accessing PostgreSQL databases
  - Wrote TypeScript/Angular to add new features to the Nextworld report builder
- Frontend web developer (Summer 2019)
  - Used TypeScript/Angular to implement features and improvements to the Nextworld enterprise software platform
  - Used the Nativescript toolkit to improve the iOS and Android mobile apps
- Integrations specialist (Summer 2018)
  - Used Rest APIs and cloud services to implement endpoints to next generation enterprise software (C#)

### Colorado School of Mines

Golden, Colorado

LINUX SYSTEM ADMINISTRATOR (SUMMER 2020 - CURRENT)

- Performed maintenance, upkeep, and upgrades on 6 Ubuntu servers
- Maintained and updated 10 CS@Mines project websites
- Provided and managed package mirrors for Arch Linux and Ubuntu

UNDERGRADUATE RESEARCH ASSISTANT (FALL 2020 - CURRENT)

- Studying regular expression synthesis and optimization

TEACHING ASSISTANT - INTRO TO LINUX (FALL 2020)

- Held office hours twice a week, assisted students in Linux and shell scripting basics, graded and provided feedback on assignments for 220 students

#### LEAD U-CLIMB MENTOR / TA FOR INTRO TO COMPUTER SCIENCE (SPRING 2020 - SUMMER 2020)

- Managed U-CLIMB mentors, scheduling, task distribution, and creating / presenting training material for TAs to teach introductory computer science material to 400 students
- Performed interviews and made hiring decisions for future mentors

#### U-CLIMB MENTOR / TA FOR INTRO TO COMPUTER SCIENCE (FALL 2019)

- Assisted with instructing lessons about algorithms, data structures, and other introductory computer science material
- Provided one-on-one mentorship and support for Intro to Computer Science students

#### Datava

Remote

#### CS@MINES FIELD SESSION (UNPAID)

Summer 2020

- Migrated backend stack (PHP, Apache, MySQL) to a containerized system using Docker
- Got trained on scrum, product design, and other software engineering concepts
- Acted as product owner, which included developing definition of done and creating a requirements document

#### Valor Christian High School

Highlands Ranch, Colorado

#### IT INTERN

September 2015 - May 2018

- Managed 550 Apple devices, from hardware maintenance to software deployment and assisted in network configuration in a Jamf JSS environment, as well as assisting in budget approval and project management
- Migrated on premise servers to cloud based solutions

#### Awards

2020	<b>Fourth Best Overall Hack</b> , Hack CU VI Hackathon	University of Colorado
2018	<b>Best Use of Twilio API</b> , MHacks 11 Hackathon	University of Michigan
2019	<b>Most Random Hack</b> , Hack CU V Hackathon	University of Colorado
2019	<b>Second Overall</b> , Google Passport Design Challenge	Google Boulder
2018	<b>Presenter</b> , C-MAPP Event - CSCI 101 Poster Presentation	Colorado School of Mines
2018	<b>Eagle Scout</b> , Boy Scouts of America	Troop 628

#### Programming Challenge Awards / Certifications

2020	<b>Python (Basic)</b> , HackerRank Certification	Online
2020	<b>Problem Solving - Three Stars</b> , HackerRank Skill	Online

#### Extracurricular Activities

##### Association of Computing - Women (ACM-W)

Golden, Colorado

#### SECRETARY

Fall 2020 - Spring 2016

- Helped plan club meetings with goal of increasing diversity in the field of Computer Science
- Presented several talks, including talks on  $\text{\LaTeX}$  and data privacy/security
- Managed attendance tracking to distribute extra credit for a variety of courses

##### Colorado School of Mines OreSec Cybersecurity Club

Golden, Colorado

#### VICE PRESIDENT & COFOUNDER

Spring 2019 - Fall 2020

- Organized club meetings and gave presentations about cybersecurity topics
- Raised awareness of personal privacy and security around campus
- Gave presentation on the reverse engineering tool Ghidra

##### Association of Computing (ACM)

Golden, Colorado

#### MEMBER

Fall 2018 - Current

- Participated in Hackathons and other club events and programming competitions
- Volunteered for the High School Programming Competition hosted by Mines to encourage interest in CS@Mines

##### Linux Users Group (LUG)

Golden, Colorado

#### MEMBER

Fall 2018 - Current

- Interfaced with club to determine requirements for the servers I controlled as the CS@Mines system administrator (see experience section)
- Participated in club meetings to discuss and learn more about Linux and related subjects

##### Boy Scouts of America - Lone Tree, CO

Lone Tree

#### EAGLE SCOUT

September 2017

- Learned leadership skills through outdoor adventures including trips to Florida for sailing and Minnesota for backpacking