

# Kenan Schaefer

Software engineer with interests in game design, digital audio, and open-source software.

Studied Computer Science, Mathematics, and Music

## EXPERIENCE

### *Software Engineer II — Garmin AT*

August 2022 - Present

Building embedded state of the art avionics GPS systems to comply with FAA certifications under the DO-178b guidelines. Focused on the graphical mapping interface that displays flight data layers to pilots. Working in embedded C and C++ with tightly written unit tests and cross-referenced code requirements, collaborating in-person and remotely with a large team.

### *Game Developer — Brontobit Studio*

June 2021 - May 2022

Started an indie studio to pursue a longtime dream, to design a game that integrates music and gameplay in a flexible way. Developed a C++ software synthesizer from scratch, with a corresponding Unity integration for live music synthesis, such that every musical event is fundamentally tied to gameplay. Failed to design an MVP that had an acceptable difficulty curve within the target demographic per my own user testing, but it's super cool.

### *Software Engineer II — Root Insurance Inc.*

August 2019 - June 2021

Implementing new pricing methods in Root's Ruby on Rails backend. Coordinated with dozens of other engineers working on the same codebase. Reviewed code written by others, providing and responding to pull request feedback on a daily basis. Spent one year working at Root's offices, and one year from home.

### *Web Developer — Studio Ace of Spades*

June 2018 - August 2019

Did contract work for a business client of SAoS, coordinating remotely with their team in California via Jira and Slack. Managed heavily customized wordpress installs hosted on various AWS instances.

1398 NE South Nebergall Loop  
Albany, OR, 97321

(765) 203-1415

kbitikofer@gmail.com

[kenan.schaefer.com](http://kenan.schaefer.com)

[linkedin.com/in/kenan-schaefer-2b5a2b92/](https://linkedin.com/in/kenan-schaefer-2b5a2b92/)

## SKILLS

Git, AWS, SQL, client/server architecture, GNU/Linux, digital audio signal processing, sound design, and many other software technologies

Skilled communicator in speaking and writing

Great musician, at least in theory

## LANGUAGES

**Computer:** C++, Python, Ruby on Rails, Typescript, PHP, Java, Haskell, and more

**Human:** English (native), Spanish (basic functionality)

## PROGRAMMING PROJECTS

[kenan.schaefer.com](http://kenan.schaefer.com)

Projects include a sheet music playback website, multiplayer web games, algorithmic resource allocation, custom 3d printing firmware, Project Euler solutions, a chiptune softsynth, and much more. All my personal projects go on GitHub, and I'm always coding.

## UNDERGRADUATE EDUCATION

*Goshen College, Goshen, IN — Computer Science*

FALL 2014 - SPRING 2018

With minors in Mathematics and Music.

GPA: 3.97

## ***IT Application Services Intern — Everence***

Spring 2018

Learned to automate and integrate Microsoft products with IBM i languages (CL, IQ query, RPG, DB2). Automated and streamlined internal and external reporting processes involving these softwares. Learned business logic of Everence as a full-service financial institution and regularly reported on findings in department meetings.

## ***Fair Allocation Research — Goshen College***

Summer 2017

Studied the purported discrete and bounded method of envy-free resource allocation among arbitrary agents, proposed by Aziz and Mackenzie in 2016. Our research resulted in the discovery of a counterexample to their working paper, and reopened a question in Computer Science theory of whether such an algorithm exists.

## ***Google igniteCS facilitator — Goshen Middle School***

Fall 2016

Through Goshen College's CS department, I worked with an engaged group of 28 middle schoolers, guiding them through the basics of programming visuals and games in Python using their own assembled raspberry pi kits. This involved designing, testing, and teaching the materials, worksheets, and hardware that the students would use.

## ***System Administrator — Mennonite.net***

SUMMER 2016

Performed server administration for over 100 web hosting clients, including both frontend work with Wordpress, Drupal, HTML, and CSS, and backend maintenance and scripting with Bash and Python. This provided invaluable experience working with a network of servers that each serve distinct purposes in an organization's infrastructure.

## **COLLEGE EXPERIENCE**

**1 sem:** Study-Service Term in Peru, living with native host families and teaching english

**4 yrs:** Putnam Mathematics Competition (scores: 13, 0, 11, 10)

**2 yrs:** Leader of Programming club

**4 yrs:** Member of All-Campus Band

**4 yrs:** Member of Symphony Orchestra

**4 yrs:** Member of Men's Chorus

**1 yr:** Member of Chamber Choir

**3 yrs:** ACM International Collegiate Programming Competition (Grand Valley site)

**3 yrs:** Global Game Jam: designing a game with a team in 48 hours

## **REFERENCES**

**Jimmy Devine**, Senior Engineering Manager at Root Insurance, Columbus, OH.  
[linkedin.com/in/jwdevine/](https://www.linkedin.com/in/jwdevine/)

**David Housman**, Professor of Mathematics at Goshen College, Goshen, IN.  
[dhousman@goshen.edu](mailto:dhousman@goshen.edu)

**Jeanette Shown**, Professor of Computer Science at Goshen College, Goshen, IN.  
[jlshown@goshen.edu](mailto:jlshown@goshen.edu)