

Kenan Schaefer

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

Studied Computer Science, Mathematics, and Music

EXPERIENCE

Game Developer — Brontobit Studio

June 2021 - Present

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. Currently in a playtesting phase, with a crowdfunding push planned for the summer.

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.

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.

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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: Python, Ruby on Rails, C#, C, Javascript, PHP, Java, Haskell, and more

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

PROGRAMMING PROJECTS

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

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.

2D Cellular Automata Research — Goshen College

Summer 2015

Created a categorization of 2D cellular automata, where agents in an organized network can interact with their neighbors and make choices dependent on their own payoffs and their neighbors payoffs in iterated modified prisoner's dilemma games.

On-campus Tutor for Math, Programming — Goshen College

Fall 2014 - Spring 2018

Tutoring students in calculus, discrete math, functional programming, and Python.

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.
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