

Nigel Baillie

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<https://nigelbaillie.me>

<https://github.com/Resonious>

Programming Languages:

C, C++, C#, Java, Ruby, Python,
SQL, Rust, Prolog, Verilog,

HTML, CSS, Javascript

Technologies:

MacOS, Linux, Windows,

Unity3D, Unreal Engine, Godot,

Visual Studio, GNU Make, Git,

RSpec, Capybara, Travis CI,

Rails, Nginx, Capistrano,

MySQL, Redis, Sidekiq,

Wireguard, OpenVPN

Education

Computer Science BSE – GPA: 3.2

University of Michigan Ann Arbor, May 2019

Computer Architecture (superscaler, out-of-order execution)

Operating Systems (thread library, memory pager, filesystem)

Video Game Development (Unity3D)

Artificial Intelligence (A*, constraint satisfaction, neural networks)

Computer Security (application, network, web security)

Experience

Software Developer

Aug 2014 – Sept 2018

The Ann Arbor T-Shirt Company

Developed and maintained in-house Ruby on Rails applications

Tested extensively with RSpec and Capybara

Wrote internal mobile pricing app in React Native

Improved image composition performance by 1.5× in C++ w/ libpng

Integrated with third-party APIs such as Shopify, Amazon, and more

Set up AWS Virtual Private Cloud w/ CloudFront CDN

Added detailed error reporting to retail order import routine

Replaced default HTTP 500 error page with diagnostic report form

Implemented single-sign-on authentication across apps

Software Intern

Feb 2014 – Aug 2014

The Ann Arbor T-Shirt Company

Helped team build new sales software (Ruby on Rails)

Ported old online store to new version of Spree

Extracurricular Projects

A few Ludum Dare entries (48-hour game development competition)

Some work on Wine's (<https://winehq.org>) shell notification system

Pixel-perfect 2D collision + lock-step networked multiplayer in C

Small 2D sprite renderer in Rust and OpenGL

Runtime JVM bytecode patching for Minecraft

Static site generator (for nigelbaillie.me) using NodeJS and Pug

Self-hosted Matrix (<https://matrix.org>) homeserver w/ bots

Personal Wireguard VPN deployed on DigitalOcean