

Anna Kudriavtsev

she/her • anna328p+jobs@gmail.com • (425) 312-3766 • ap5.dev • github.com/anna328p

Interests

Functional programming, systems programming, hardware design, formal verification, type theory

Technical skills

- Broad range of APIs, libraries, and frameworks, Rails, Android, Flask, SQLite, etc.
- Languages including Ruby, Nix, Haskell, Python, C#, Rust, C, C++, Kotlin, SQL
- Deep knowledge of Nix, Nixpkgs, and NixOS internals and tooling
- Git and other VCS, CI/CD, packaging and deployment systems (dnf, pacman), collaboration tools
- System administration with Linux and Unix, some experience with Windows
- Large language models, prompt engineering, function calling, fine-tuning, agentic systems, RAG
- Native speaker of English and Russian; fluent in Toki Pona; beginner-level French and Japanese

Projects

annaos – Not yet public; open-source release planned

- Independent, fully-declarative, modern Linux distribution based on the Nix package manager
- Uses a component-based framework for composing, isolating, and securing applications and services

nix-prelude – github.com/anna328p/nix-prelude

- Open-source, independent ground-up rewrite of the standard library for the Nix language
- Designed for projects that don't use the main Nix package repository (nixpkgs), including annaos

QBot – github.com/arch-community/qbot

- Discord bot that handles moderation and utility tasks for over 20,000 users across 100+ communities
- Open-source; written in Ruby; uses Nix for reproducible builds and Continuous Deployment

CU Navigator – Not yet public; open-source release planned

- Mobile app for the local bus system, including real-time data, schedules, routing and navigation
- Built for Android, with planned iOS support, using Kotlin, Jetpack Compose, and SQLite

NumpadA (Inexpensive Computers) – b.inexcomp.com/product/numpada-pcb

- Designed a fully-programmable number pad with mechanical key switches and backlighting
- Designed custom case and PCB with Fusion 360 and KiCAD; ported QMK firmware
- Manufactured, programmed, sold, and shipped several prototypes with a WordPress-based web store

Activities

Advent of Code – adventofcode.com

December 2018 - December 2023

- Participated in a yearly global competitive programming event, solving algorithmic puzzles
- Placed seven times in the top 100 of 400,000+ total participants, writing solutions in Ruby

(see next page for education and experience)

Education

University of Illinois at Urbana-Champaign

August 2020 – May 2023

- Computer Engineering program; technical GPA of 3.71

Experience

Open source development, private consulting, and freelance work

August 2022 – present

- Nix/NixOS, Espressif ESP-IDF, SQLite, AI, LLMs, parametric CAD, additive manufacturing, type design

The Trade Desk – Software Engineering Intern – Seattle, WA

May 2022 – August 2022

- Prototyped a framework to test the Attribution analytics stack on production data to identify regressions
- Automated 5-6 hours of testing per commit, detecting drops in performance and correctness
- C#, Vertica, Windows Server, Microsoft SQL, Ruby

CASTUS Corporation – Engineer Intern – Issaquah, WA

December 2018 – August 2021

- Designed, developed, and supported apps for Video on Demand system, used by hundreds of clients
 - Full-stack solution; client applications for Roku and Apple TV; serverless backend
- Created a hardware device for CASTUS playout servers to detect relay signals on cruise ships, to integrate onboard TV channels with existing control systems
- Designed a digital signage system comprising ARM-based hardware players and a management server
- Migrated over 300 clients' Cloud VOD data from PostgreSQL to MongoDB with a team of three engineers
- AWS Lambda, S3, Ruby, Sinatra, TypeScript, BrightScript, Swift, Nix/NixOS, KiCAD

Bloomz, Inc. – Software Testing Intern – Redmond, WA

February 2018 – August 2018

- Performed regression testing for over 10 new releases of the Bloomz education web app
- Managed support for 50+ clients, including technical support, billing management, and other tickets

Issaquah School District – Software Developer Intern (EdTech) – Issaquah, WA

March 2017 – June 2017

- Wrote a searchable catalog of education technology tools and an inventory management system
- Ruby on Rails, HTML/CSS