

# Alex van de Sandt

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*Software Engineer specializing in Rust seeking a full-time Senior role*

## Professional Experience

### Fieldwire by Hilti

SOFTWARE ENGINEER III - BACKEND SERVICES

Chicago, IL (Remote)

July 2022 - April 2026

- Architected a high-throughput event streaming system using Rust, Actix, and AWS Kinesis to support Audit Log and Webhooks services
- Overhauled self-checkout billing services to support new payment processors and internal lead-tracking systems, improving visibility for enterprise sales leads and centralizing control of new and existing revenue
- Migrated the first \$1 million of revenue across multiple sales regions from Stripe to the new internal billing and account management system
- Led maintenance on a 200k LOC Rust repository, keeping dependencies up to date and improving internal tooling to accelerate development for cross-functional teams
- Built webapp- and customer-facing APIs with Axum and Ruby on Rails to support billing, authentication, and user management across multiple regions for 100k active users
- Continuously refactored existing API flows to reduce database query volume by more than 10x, greatly improving service availability and eliminating failed API calls

Rust Ruby on Rails PostgreSQL Axum Tokio Kinesis DynamoDB

### Honeywell

SOFTWARE ENGINEER - TIGER INTEGRATED SYSTEMS

Atlanta, GA (Hybrid)

August 2020 - June 2022

- Achieved digital transformation by modernizing three legacy maintenance tracking systems into a single Node.js-powered platform to streamline processes for service engineers to diagnose and report engine issues
- Migrated disparate legacy Oracle databases into a single data model in PostgreSQL, improving resiliency, efficiency, and accuracy of contractually-required reports
- Mentored an intern, onboarded them to our backend development processes, and helped them learn SQL and TypeScript

Node.js React TypeScript PostgreSQL

SOFTWARE ENGINEER - GODIRECT FLIGHT PLANNING ENGINE

- Built microservices and frontend components to integrate 3rd-party and internal services into a single aviation fleet dashboard, unifying the customer experience and increasing the value of a flagship product
- Worked with multiple teams around the globe to migrate React components from legacy systems and increase developer efficiency

Node.js React Microservices

SOFTWARE ENGINEERING INTERN

Summer 2019

- Developed microservices to produce weather data and airport information, and integrated them into an interactive map on the frontend
- Implemented a comprehensive menu in React to control layers of data displayed on a flight routing engine
- Designed and implemented an algorithm to split GeoJSON objects across the anti-meridian, bringing our data into compliance with specs

Node.js React GeoJSON Microservices

### Clear Software

SOFTWARE INTERN

Zionsville, IN

Summer 2017

- Worked directly with clients to determine requirements for product customization
- Built a generic Django-HTTP connector in Python to enable integration with existing enterprise systems
- Configured ad hoc dashboards for customers using Django templates

Python Django

## Skills

**Languages** Rust | Ruby | SQL | Nix | TypeScript

**Tech Stack** PostgreSQL | AWS DynamoDB | AWS Kinesis | Git | Jujutsu | NixOS | Linux

**Frameworks** Tokio | Axum | sqlx | Ruby on Rails | React

# Education

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## Purdue University

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

West Lafayette, IN

2016 - 2020

- Tracks: Programming Languages, Systems Programming
- Participated in the Purdue Cycling Club and the Purdue Symphony Orchestra playing the violin

ELECTRONICS TEAM MEMBER, FORMULA SAE

2019 - 2020

- Developed tools in Rust to interact with the vehicle's CAN bus over a wireless network via a Raspberry Pi
- Assisted in construction of the wiring harness

SOFTWARE TEAM LEADER, ACM SIGBOTS

2016 - 2019

- Led team of peers to design and implement control software for a competition robot
- Worked on design and development of the Purdue Robotics Operating System (PROS) 3.0

# Personal Projects

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## arctictis

RUST LIBRARY

[igneousflock/arctictis](#)

2026

- Program Uniden radio scanners through the serial interface
- Written with `tokio`
- Leverages the macro system to abstract away protocol details

Rust Tokio

## candid

RUST LIBRARY

[igneousflock/candid-rs](#)

2019

- Relay Controller-Area Network (CAN) bus messages over a network
- Built for the Purdue Formula SAE team to debug vehicle telemetry

Rust Tokio SocketCAN

# Volunteer Work

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## Bird Conservation Network

MONITOR

Chicago, IL

June 2026

- Performed point-count surveys throughout the month to gather data on breeding bird populations at a local forest preserve

Volunteer Citizen Science