

# Sean Borg

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## PERSONAL STATEMENT

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A software developer with a passion for Rust, having used it from bare metal (esp32-c3) to WASM and micro-service applications. My build deployment tool of choice is Nix having all my systems run it and orchestrating my boats automaton.

## WORK

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**Software engineer** **April 2020 - Current**  
**Codethink** **(Full-time)**

- Learned and made heavy use of CI, mainly through Gitlab (now have a personal cluster of RPI Gitlab runners) but also have experience using Jenkins and Circle CI
- Gained a good understanding of large scale build systems

**Owner** **Nov 2019 - Current**  
**Track a Train** **(Part time)**

- Available on android app store **trackatrain.co.uk**
- Gained understanding of android ecosystem; API's, google play store listing, charging subscriptions natively in app
- Making good use of unit tests to prevent regressions while iterating quickly

**Software developer** **January 2018 - April 2020**  
**Handsfree Group** **(Contract)**

- Created a suite of apps hosted by Google app engine, front-end Angular, back-end Django
- Beta version of 'DVSA earned recognition's compliant software
- Back-end. Agency Driver Onboarding and Defect Reporting app, using test driven development to keep bugs down and prevent regressions
- Produced a demo Android app to communicate with a Pietel PTCarPhone **in 4 days**

## PROJECTS

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**Nixos** **Feb 2021 - Current**  
**Self taught**

- Learned and installed Nixos on all my devices, allowing me to treat my devices much more like cattle as rebuilding one can be done in minutes
- Manage 10+ devices with Nixos/Krops that can be updated remotely and do a wide variety of tasks; personal laptop, work laptop, home NAS and home automation

**Rust** **Dec 2020 - Current**  
**Self taught**

- Started learning during Advent of code and quickly became my favorite language. Now all my new projects public on Gitlab are in Rust, I maintain the zigbee2mqtt-types and help contribute to other open source Rust projects
- Using my spare times to explore different styles or Rust I have had a project using; Async, multithreaded, bare metal and WASM. My next big one is interoperating with pre-existing C code/lib

**Personal** **Oct 2020 - Current**  
**Home (boat) automation**

- Rolled out sensors across boat to track various data points using open source tools; zigbee2mqtt, grafana, prometheus
- Thanks to nixos, all the computers are backed up nightly and easily redeployable in 15 min if any break
- I became unhappy with all the automation systems so started writing my own micro-services in Rust to handle them instead. A.K.A. "Skipper" on my Gitlab

## EDUCATION

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**Bangor University** **September 2015 - June 2018**  
**Second Class Upper division BSc in Computer Science**