

# Johan Backman

backman93@gmail.com (+1) 415 909 8268  
2897 Cesar Chavez St San Francisco, 94110

 [linkedin.com/in/backmanjohan](https://www.linkedin.com/in/backmanjohan)

 [github.com/barreyo](https://github.com/barreyo)

## Experience

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### Infrastructure Engineer, Sano Intelligence

Jul 2018 - Current

- Sole responsibility for the backend Infrastructure in AWS
- Migrating ECS-based environments to EKS
- Writing backend micro-services in Python utilizing RabbitMQ, MySQL and Redis

### Software Engineer / AI Researcher, Bracket Computing

Dec 2017 - May 2018

- Reinforcement Learning research focused on autonomous cyber-threat response using Bayesian Attack Graphs formulated as a Partially Observable Markov Decision Process (POMDP)
- Developed FreeBSD kernel code in C, and user-space Python services that communicated with a Kubernetes-managed control plane written in Go, to collect and process large amounts of telemetry data.
- Improved and debugged micro-services implemented in Go and managed in Kubernetes
- Published an open source OpenAI environment for threat defense research ([github.com/barreyo/gym-threat](https://github.com/barreyo/gym-threat))

### Software Engineering Intern, Bracket computing

Jun 2015 - Jun 2016

- Designed and implemented the build and CI pipeline using Docker and Jenkins. Which simplified maintenance and improved consistency.
- Built a testing framework in Python based on PyTest; that made it easy to write generic tests across AWS, GCE and on-premise VMWare. The framework was used by the whole organization of about 30 engineers.
- Wrote end-to-end integration and performance tests

### Software Engineer, Freelance

Apr 2015 - Jul 2015

- Designed and developed the embedded software for a low-cost road sign that shows the current speed of passing vehicles, bikers and pedestrians using radar technology
- Mocked the hardware features of the custom-designed hardware to create regression tests

### Vice Business Area Manager, Chalmers Teknologkonsulter

Jan 2014 - Jun 2014

- Managed 18 software engineers in sales and project work that ranged from mobile app development to embedded systems
- Increased the time consultants were assigned to billable projects, which lead to an increased business area revenue by 80%

### Software Engineer Consultant, Chalmers Teknologkonsulter

Sep 2013 - Feb 2015

- Embedded development in C on custom-designed BLE hardware
- Developed core technology, OTA updates over Bluetooth, charging and battery management
- Developed an Android app to debug Bluetooth connections

## Education

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| <b>MSc Computer Science, Chalmers University of Technology</b>     | <b>Aug 2016 - Aug 2018</b> |
| <b>BSc Software Engineering, Chalmers University of Technology</b> | <b>Aug 2012 - Jun 2015</b> |

## Technologies

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**Languages:** Python, Haskell, C, Erlang, Rust, Go, Java, GLSL

**Other:** Docker, Kubernetes, Git, RabbitMQ, Redis, MySQL, Terraform, TensorFlow, AWS, Bash, GNUMake, GCE, OpenGL, Android, Postgres