

# Johan Backman

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

## Introduction

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## Education

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**MSc Computer Science, Chalmers University of Technology** Aug 2016 - Aug 2018

**BSc Software Engineering, Chalmers University of Technology** Aug 2012 - Jun 2015

## Experience

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**Software Engineer / AI Researcher, Bracket Computing** Dec 2017 -

- 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
- 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
- Built a testing framework in Python based on PyTest, that made it easy to write generic tests to test the product across AWS, GCE and on-premise VMWare
- Wrote end-to-end integration and performance tests
- Collaborated with the development team on test plans and requirements

**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
- Mainly in charge of sales, strategic development and training
- 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 the core technology, OTA updates over Bluetooth, charging and battery management
- Developed an Android application to debug Bluetooth connections

## Technologies

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

**Other:** Docker, Git, TensorFlow, AWS, Bash, GNUMake, GCE, OpenGL, Android