

Johan Backman

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 github.com/barreyo

Education

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

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

Experience

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, 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)

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 application to debug Bluetooth connections

Technologies

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

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