Johan Backman

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Experience

Backend Engineer, CultivateAI **Dec 2018 - Current**

- Built several integrations in our Django Backend with external providers such as Google Hangouts, Microsoft Teams and Skype
- Automated deployment process of cloud resources in AWS and Azure for customer deployments
- Built an Emoji classifier to improve the products' sentiment analysis
- Lead on security for the company, create secure development processes, handle compliance and secure customer deployments

Infrastructure Engineer, Sano Intelligence **Jul 2018 - Nov 2018**

- Engineering lead on the backend Infrastructure and architecture. Design and implementation in AWS
- Planned, proposed and implemented migration from ECS to EKS (Kubernetes) on AWS, including internal tools such as Jenkins, Docker Registry, Chartmuseum, Jupyter Notebooks etc
- Developed, tested and documented customer-facing 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). The goal was to expand on the product offering by adding an additional layer of security analysis requiring zero configuration
- Laid the foundation for new machine learning capabilities by adding collection of process data that was sent back to a control plane. The feature required FreeBSD kernel code in C, and the development of 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
- The research lead to the publication of an open source OpenAI environment for threat defense research (github.com/barreyo/gym-threat). Which will help future reinforcement learning research with similar problem descriptions

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
- Designed and developed end-to-end integration and performance tests in collaboration with product owners, developers and testers

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

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

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

Technologies

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