Fredrik **Gustafsson**

M.Sc. Student in Electrical Engineering

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- I am an engineering student whose main interests include mobile robotics, computer vision, deep learning and Bayesian filtering. I aim to contribute to the development of fully autonomous vehicles and hope to experience the day when we can safely say:
"Do you remember when people used to get killed in traffic?".

Education

Stanford University *Sep. 2016 - Jun. 2017*

Graduate Exchange Student in Electrical Engineering [4.15/4.30]

- Coursework included deep learning, Bayesian filtering and optimal control.

Linköping University *Aug. 2013 - Jun. 2018*

Bachelor of Science in Applied Physics and Electrical Engineering | Master of Science in Electrical Engineering

- Master's profile: Control and Information Systems.

Please see LinkedIn for complete coursework.

Recent Projects

Object Detection for Autonomous Driving - TensorFlow Implementation of SqueezeDet *Aug. 2017 - Sep. 2017*

Personal project | Python, TensorFlow

Semantic Segmentation for Autonomous Driving - TensorFlow Implementation of ENet *Aug. 2017 - Sep. 2017*

Personal project | Python, TensorFlow

TBD - Autonomous/Web Controlled RC Car *Jun. 2017 - Present*

Personal project | Python, ROS, HTML, JavaScript

The SE-Sync Algorithm for Pose-Graph SLAM *May 2017 - Jun. 2017*

Course project at Stanford University | C++, ROS, MATLAB

Neural Image Captioning for Intelligent Vehicle-to-Passenger Communication *Jan. 2017 - Mar. 2017*

Course project at Stanford University | Python, TensorFlow

Control of an Inverted Double Pendulum using Reinforcement Learning *Nov. 2016 - Dec. 2016*

Course project at Stanford University | Python

Rasperino - Autonomous/Web Controlled Raspberry Pi & Arduino Robot *Jun. 2016 - Aug. 2016*

Personal project | Python, C, HTML, JavaScript

Spider Pig - Autonomous Hexapod Robot *Jan. 2016 - Jun. 2016*

Bachelor thesis project at Linköping University | C

Please see fregu856.com for further information.

Relevant Experience

Deep Learning Intern *Jun. 2017 - Aug. 2017*

Zenuity *Gothenburg, Sweden*

- Developed a deep learning demo/test platform based on a standard 1/10 scale RC car.

Algorithm Engineer *Jun. 2016 - Aug. 2016*

T Engineering AB *Trollhättan, Sweden*

- Developed a web tool for analysis and visualization of car engine sensor data for a fleet of test vehicles, using Python (Flask) and MySQL.

Mathematics Coach *Sep. 2014 - Present*

LinTek (student union) *Linköping, Sweden*

- Member of a group holding weekly problem-solving sessions in first-year mathematics, open to all students at Linköping University.

Teaching Assistant *Aug. 2014 - Dec. 2015*

Linköping University (Department of Mathematics) *Linköping, Sweden*

- Teaching assistant in linear algebra and introductory calculus. Led problem-solving sessions and graded hand-in assignments.

Skills

Software (advanced)	Python (NumPy, TensorFlow, Flask), C/C++, MATLAB.
Software (basic)	SQL, HTML, LaTeX, Linux, ROS, Git, Simulink, JavaScript, Scheme.
Languages	Swedish, English.
Other	Swedish driver's license (B).