Fredrik **Gustafsson**

M.Sc. Student in Electrical Engineering
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- I am an engineering student whose main interests include autonomous robots, computer vision, deep learning and Bayesian filtering. I aim to be a key contributor 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*

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

- Master's profile: Control and Information Systems.

Please see LinkedIn for complete coursework.

Recent Projects

SMAUGS - Autonomous Minesweeping System (Ground Vehicle & Drone) *Sep. 2017 - Dec. 2017*

Course project at Linköping University | C++, Python, ROS

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

ROSperino - 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

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

Master's Thesis Student *Jan. 2018 - Jun. 2018*

Zenuity *Gothenburg, Sweden*

- 3D object detection and domain adaptation for autonomous driving, using deep learning.

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.

Skills

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