Fredrik **Gustafsson**

M.Sc. Student in Electrical Engineering

Studievägen 9B lgh 1017, 583 29 Linköping, Sweden

+46705786348 | ✉ fregu856@gmail.com | 🌐 fregu856.com | github.com/fregu856 | in linkedin.com/in/fregu856

- 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*

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 bounding box detection and data augmentation 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, 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).