# Steinar Laenen

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Nationalities & Work Authorization: USA, Netherlands(EU), Iceland

## EDUCATION

***University of Edinburgh***, United Kingdom **Sept 2018 - Aug 2019**
MSc Artificial Intelligence
Thesis: Community Detection Using Hermitian Matrices in Directed Stochastic Block Models. Supervisor: Dr. He Sun **Current GPA: 80/100 (First)**

- Relevant Courses: Machine Learning and Pattern Recognition, Algorithmic Foundations of Data Science, Reinforcement Learning, Probabilistic Modelling and Reasoning

***Amsterdam University College (AUC)***, The Netherlands **2015 - 2018**
Maths and Computer Science, BSc (Honors) Liberal Arts and Sciences.
Thesis: Visual Pathways from the Perspective of Emotion and Physical Feature Detection in Multilabel Deep Neural Networks **GPA: 3.93/4.0 (Summa Cum Laude)**

- Exchange to Stellenbosch University, South Africa. **Jan-Jul 2017**
- Relevant Courses: Natural Language Processing, Machine Learning, Data Structures and Algorithms, Mathematical Logic, Probability Theory, Discrete Mathematics.

## EXPERIENCE

***Research Team Lead***, Edinburgh University Formula Student **Oct 2018 - present**

- Led development of end-to-end controller to drive a car in ros simulation using supervised learning in TensorFlow.
- Implemented an end-to-end controller using deep reinforcement learning in simulation, which has the capacity to race faster than conventional self-driving methods.

***Summer Researcher***, Warm Arctic ehf, Iceland **Summer 2018**
Geothermal Energy Consultancy
Supervisor: Grímur Björnsson

- Used drones equipped with RGB and infrared cameras to create orthomosaic maps of areas that contain (potential) geothermal energy sources.
- Sped up large image dataset processing 20x using exiftool, python, and optimized bash scripts, so images can be processed on-site, leading to more effective heat search.
- Developed an anomaly detection system using deep autoencoders and a one-class SVM to detect geothermal lineaments in Ethiopia, which decreased manual work.

***Research Engineering Intern***, Reykjavik University, Iceland **Summer 2017**
Centre of Analysis and Design of Artificial Agents
Supervisor: Prof. Hannes Högni Vilhjálmsson

- Designed and programmed automated intelligent social behaviour for virtual agents in Unity3D and C# in a research group.
- Constructed numerous complex social behaviours for virtual agents such as glancing patterns, conversation habits, and gesticulations.
- In charge of finalizing the project and setting up results for publication.

***Receptionist***, Hotel Borg & Hotel Apotek, Iceland **Summer 2016**

## PUBLICATIONS

Interpreting Social Commitment in a Simulated Theater. Vilhjálmsson et al. *18th International Conference on Intelligent Virtual Agents*, Sydney, Australia, November 2018

Thermal Mapping of Icelandic Geothermal Surface Manifestations with a Drone. Björnsson et al. *44th Stanford Geothermal Workshop*, Stanford, USA, February 2019

## COMPUTER & MATH SKILLS

*Programming:* Python, C/C(#), HTML, CSS, LaTeX, PyTorch, TensorFlow, Keras
*Operating Systems:* Linux, Windows
*Mathematics:* Linear Algebra (24 EC), Calculus (24 EC), Probability & Statistics (24 EC)

## COMMUNITY SERVICE

Taught an intensive one month A1 CEFR level Dutch course to refugees from Syria, Uganda and Iran in January of 2016. This ranged from grammar to cultural discussions.

Volunteer at Vlottenburg Primary School, Stellenbosch, South Africa during 6 month exchange in the spring of 2017. Organized weekly activities with a class of 5 to 6 year olds, such as sports, hand-craft, singing and dancing.

## LANGUAGES

Fluent: Dutch, Icelandic, English
Advanced: German (C1 CEFR). Basic: Spanish and French (A2 CEFR)

## EXTRA-CURRICULAR ACTIVITIES

Science Editor at InPrint, AUC's undergraduate academic journal **2017/2018**
Writer at TedXAUCollege **2017/2018**
Summited Mount Kilimanjaro **April 2017**
Delegate at Harvard WorldMUN conference **March 2016**
Delegate at multiple European Youth Parliament (EYP) conferences **2015**