

# Bruno K. Mlodozeniec

Information / Machine Intelligence Engineering Undergraduate · Third Year

Emmanuel College, St Andrew's St, Cambridge, CB2 3AP, United Kingdom

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## Education

### University of Cambridge, Emmanuel College

2016-2020

M.Eng. in Engineering

Cambridge, UK

**Year 1 Performance: 1st Class.** Top 10% of class.

**Year 2 Performance: 1st Class.** Top 8% of class. Awarded Rowley Mainhood College Prize for academic performance on exams.

**Courses include:**

Control Theory  
Linear Algebra

Information Engineering  
Vector Calculus

Bioengineering  
Linear Systems

Linear Algebra  
Signal Processing

**Coursework includes:**

- Programming: Python, C++, Version Control and Collaborative Programming with **git**, Microprocessors
- Design: Conceptual Product Design, CAD
- IDP: Integrated Design Project. In a team of six we collaborated to build and test a mobile robot vehicle for a student competition, including software in C++.

**Additional Computer Science Modules:**

Artificial Intelligence

Machine Learning and Real-world Data

### Kristiansand Katedralskole Gimle

2014-2016

Secondary School - International Baccalaureate

Kristiansand, Norway

- IB Diploma score: 43 / 45.
- Extended Essay and Theory of Knowledge grades: A & A
- Bilingual Diploma achieved in English and Norwegian

## Experience

### Harvard University

July - August, 2018

Harvard School of Engineering and Applied Sciences (SEAS) Intern - Visual Computing Group

Cambridge, USA

- Primary Activity: Deep Learning Methods for Motif Discovery and Structural Network Analysis of Biological Neural Networks
- The goal of the internship was to investigate options for analysis of large connectomics graph datasets representing biological neural networks with over 1 million neurons derived from the 3D segmentation of EM images performed by the Visual Computing Group.

### Cisco Systems

July - September, 2017

Machine Learning and Deep Learning Intern

Oslo, Norway

- Primary Activity: Wake Word Detection for Cisco Webex.
- Trained multiple deep learning architectures including convolutional and recurrent neural networks for the problem of keyword spotting.
- Developed a Python routine for training, validating and testing keyword spotting models with efficient off-GPU example queuing.
- The solution created during the internship outperformed previous solutions.

## Skills

### Programming:

**Proficient:**

• Python

• TensorFlow

• PyTorch

• C++

## Honors & Awards

### International Mathematical Olympiad (IMO)

July, 2015

| Honourable Mention

Chiang Mai, Thailand

- 2nd best score on the Norwegian team.
- During the week-long preparation camp, developed formality in mathematical thinking, as well as creativity in mathematical and general problem solving.

## Norwegian Mathematical Olympiad

March, 2016

### | 3rd place

Trondheim, Norway

- Based on my performance in the national olympiad, I was selected to represent Norway in the International Mathematical Olympiad (IMO) and the teamwork-oriented Nordic Mathematical Olympiad (NMC)

## Norwegian Physics Olympiad

April, 2016

### | Finalist

Oslo, Norway

## Norwegian Mathematical Olympiad

March, 2015

### | 6th place

Trondheim, Norway

## Societies

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2018 - Now **Co-founder**, Cambridge University Machine Intelligence Network

Cambridge

- Co-founded a society with the aim of providing a platform for students with interest in machine intelligence to collaborate, organise workshops, and coordinate teams to participate in machine learning competitions and run machine learning projects.

2017 - Now **Vice-President**, Emmanuel Engineering Society

Cambridge

- Vice-president for a newly founded engineering society with the aim of connecting Emmanuel engineering students from across different years and Emmanuel College alumni to foster cooperation and exchange of ideas.

2016 - Now **Member, Presenter**, Hackers at Cambridge

Cambridge

- Lead a workshop sponsored by Docker on their platform for the university students.
- Collaborated to come up with ideas, prepare, and run workshops.

2014 - 2016 **Vice-president**, Amnesty International - Kristiansand Youth Division

Kristiansand, Norway

- Initiated projects and events to of advocate against human rights violations.

## Other

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### Languages:

#### Native Level:

English

Norwegian

Polish

- Guitar player and song-writer.
- Uses VIM bindings in my IDE.

## References

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### Dr Svein Gunnar Pettersen

Cisco Systems, Norway

Software Projects Manager at Cisco Systems

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### Dr Alexandre J. Kabla

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