

# ZOHAAD FAZAL

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## EDUCATION

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### Maastricht University – School of Business and Economics

Bachelor of Science, Econometrics and Operations Research

- Thesis: *Boosting for learning graphs from high-dimensional VAR models*

Maastricht, The Netherlands

December 2020

### Rensselaer Polytechnic Institute – The Lally School of Management

Study Abroad Semester – Non-matriculating student

- Relevant coursework: *Distributed systems and Algorithms, Quantitative Methods for Business*

Troy, NY, USA

Fall semester 2019

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## WORK EXPERIENCE

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### HSBC Germany

Equity Derivatives Trading Intern

- Worked on an existing arbitrage back-testing framework: refactored the pandas code and replaced bottlenecks by SQL, reducing the running time of a time-consuming piece of code by >99%.
- Created a volatility surface interpolator over time and strike, which is used to explain the reasoning behind trades on warrants with non-traditional expiration dates.
- Created a volatility surface plotter over time and expiry, used to compare surfaces and draw inference.
- Made various other tools for helping traders make better informed trading decisions.

Düsseldorf, Germany

November 2018 – August 2019

### Accenture

Machine Learning Intern

- Built a convolutional neural network (CNN) for image recognition of handwritten characters (MNIST database) using TensorFlow and Keras, extended this to include a pipeline where real pictures can automatically be processed, and their value can be inferred.
- Wrote documentation on how machine learning can be applied to future business needs.

Heerlen, The Netherlands

July 2017 – September 2017

### Scope | Vectum

Study Association of Econometrics, External Affairs Committee

- Organised an econometrics case day for ~50 students where 4 companies present challenges in operations research, actuarial sciences, data science and finance.
- Built and maintained relationships with said companies.

Maastricht, The Netherlands

September 2015 – July 2016

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## SKILLS

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### Technical skills:

**Python** (NumPy, pandas, Numba, SciPy, matplotlib), **SQL**, **R** (Econometrics), **Java** (Operations Research implementations), **Machine Learning** (Python with TensorFlow and Keras), **Linux** (Ubuntu, VPS, IRC bouncer, personal website), **Vim**, **git**, **LaTeX**

### Languages:

- Dutch (fluent)
- English (fluent, **Cambridge Advanced English**, Grade A, C2 Level)
- Punjabi (fluent)

### Accomplishments:

- **Winner 2017 ADE hackathon**
  - Worked in a team to build an app for the safety of partygoers and successfully pitched it to dozens of industry leaders.