

# Steffen Holter

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## Education

### New York University Abu Dhabi

B.Sc. IN ELECTRICAL ENGINEERING MINOR IN COMPUTER SCIENCE (3.91/4.00)

Sept 2014 – May 2019

- Coursework in Software Engineering (Java), Digital Logic, Electronics, Communications Theory

Study Abroad: New York University, New York

Sept 2017 – May 2018

- Coursework in Machine Learning (Python), Object Oriented Programming (C++), Computer Networks

## Experience

### NYU Vida Lab Research Assistant, New York City, NY

July 2018 – Aug 2018

- Worked in the Visualisation, Imaging and Data Analytics Lab to develop efficient visual solutions to understand the internal operation of a range of machine learning models
- Wrote code using Python libraries such as scikit-learn and PyTorch to train high accuracy models used for testing purposes

### Skandinaviska Enskilda Banken Corporate Banking Analyst, Tallinn, Estonia

July 2017 – Aug 2017

- Collaborated with a team of three in managing a portfolio that included firms like Toyota, SAS Airlines, Kärcher and GE
- Met with prospective clients to discuss their future outlook and evaluate potential cooperation opportunities

### Swedbank Data Analyst, Tallinn, Estonia

June 2016 – Aug 2016

- Built financial models and projections for medium sized firms at the behest of the corporate division
- Restructured the data quality metrics and business rules currently implemented in Swedbank group to increase efficiency in international data sharing and analysis

## Projects

### Feature Extraction and Data Visualization Senior Design Project

Sept 2018 – Present

- Designed and implemented an autoencoder inspired convolutional neural network architecture to extract the fundamental features from large scale data
- Trained and optimized the neural network in PyTorch to identify the intrinsic dimensionality of the data
- Worked towards creating interactive and rapidly rendering visualizations using Qt

### ML-Explainer FICO Explainable ML Challenge

June 2018 – August 2018

- Constructed an interactive web application that increases machine learning model interpretability by generating local and global level explanations
- Wrote code to create compact visualizations of the underlying algorithms in javascript and D3js
- Designed a website in HTML and javascript to house the application
- Performed extensive data preprocessing and optimization to increase SVM model accuracy

### Music Classification Machine Learning

May 2018

- Generated MFCCs for 30 second music samples and performed dimensionality reduction to create 3D visualizations
- Performed a comparative performance analysis on various classification models ranging from Support Vector Machines to Deep Neural Networks

## Skills

**Comfortable** Python, C++, PyTorch, D3.js

**Familiar** Java, Git, Matlab, JavaScript, HTML, CSS

## Extracurricular Activity

Music Columnist: The Gazelle | Volunteering: Habitat For Humanity

## Languages

Estonian – Native; English – Fluent; French – Conversational; Swedish – Basic