

1206 Haight St.  
San Francisco, CA 94117

Alexander van Grootel

Phone: +1 (617) 417-0986  
Email: [alex.van.grootel@gmail.com](mailto:alex.van.grootel@gmail.com)

---

## Summary

I have expertise in designing and applying technical solutions at the intersection of domains. With deep technical knowledge in machine learning and data science, paired with domain expertise in policy, sustainability and manufacturing, I am most effective working in technical teams with one foot in the strategy and business world. Passionate about deploying technology in a responsible, sustainable way.

---

## Relevant Experience

### Citrine Informatics

#### Redwood City, CA

#### Data Scientist (Team Leader) – Data Science & Materials

Aug 2019 - Current

- Leading a team of data scientists & data engineers on our largest (7-figure USD) contract where we deploy AI for materials innovation.
- Executing on the flagship project at our client, using graphical models and uncertainty estimation to design materials experiments.
- Prioritizing most meaningful work for the team and strategizing technical approaches and messaging. Identifying and mitigating risks.
- Communicating regularly with R&D leads, presenting quarterly to BU heads and Execs. Presented numerous webinars and conferences.
- Researching and designing new AI algorithms and worked with Product and Engineering to implement these in our platform.
- Mentoring people on AI to promote better understanding and external messaging, including the COO and critical sales team members.

### Massachusetts Institute of Technology (MIT)

#### Cambridge, MA

#### Graduate Research Assistant – Olivetti Group – Machine Learning & NLP

Sept 2016 – June 2019

- Engineered a bespoke data-pipeline to extract specific and detailed manufacturing data from millions of sentences using NLP.
- Designed novel modeling approach and data strategy for experiment disambiguation (named entity recognition). Publication in review.
- Conducted Life Cycle Analysis and financial models to investigate the impact of manufacturing uncertainty on sustainability and cost.

#### Graduate Research Assistant – Environmental Benign Manufacturing - Sustainability & Cost Modeling

Sept 2016 – Dec 2017

- Developed cost and energy models of an innovative manufacturing process in collaboration with multiple Fortune 500 companies.
- Identified obstacles to development and proposed ways to accelerate commercialization while maintaining low environmental impact

### Titan Advanced Energy Solutions

#### Cambridge, MA

#### AI Consultant – AI & Data Strategy

Aug 2018 – Nov 2018

- Created predictive model on the charge of a battery. Model remains the best performing 2 years later despite their continuous efforts.
- Conducted feature engineering research and identified important risks which had a direct impact on the prioritization of their research.
- Developed and recommended a data strategy to prioritize most valuable information and to ensure readiness for AI modeling.

---

## Education

### Massachusetts Institute of Technology (MIT)

#### Cambridge, MA

#### Dual MSc. in Computer Science and Electrical Engineering & Technology and Policy

2016 – 2019

Dual degree focusing on AI. Machine learning, statistical learning theory, probability, statistics, policy, finance, law, sustainability, energy.

#### MEng in Advanced Manufacturing and Design

2015 – 2016

Masters with professional outlook that combines engineering with business. Accounting, manufacturing systems, design, systems modeling.

### University of Edinburgh

#### Edinburgh, UK

#### Bachelors of Engineering in Mechanical Engineering with Management

2011 – 2015

*First Class Honors*

4<sup>th</sup> year Class Medal (top in class) and Top Dissertation award in Mechanical Engineering with Management.

---

## Skills & Interest

**Software:** Python (NumPy, spaCy, scikit-learn, TensorFlow, Matplotlib, pandas, Keras, seaborn, pyMongo), jupyter, MongoDB, Matlab, R (ggplot), git, Asana, Slack, Visual Basics, Bash, Linux, Microsoft Office (Excel, Powerpoint, Word)

**About me:** Lived in Indonesia, Singapore, Bahamas, the Netherlands, UK and US. Traveled to over 20 other countries. I speak English and Dutch fluently, and have basic proficiency in Indonesian and French.