

Emilien Dupont

emiliendupont.github.io

EDUCATION

STANFORD UNIVERSITY
MS IN COMPUTATIONAL AND
MATHEMATICAL ENGINEERING
GPA: 4.02
Teaching Assistant for ODEs
2014-16 | Stanford, CA

IMPERIAL COLLEGE LONDON
BSc IN THEORETICAL PHYSICS
Grade: 87.2%
Rank: 1st of 206 students
2010-14 | London, UK

COURSEWORK

MACHINE LEARNING

Deep Learning • Machine Learning •
AI • Reinforcement Learning

MATHEMATICS

Linear Algebra • Statistics • Convex
Optimization • Information Theory •
Complex Analysis • Group Theory •
Discrete Math and Algorithms

SKILLS

PROGRAMMING

Experienced
Python • C++ • Matlab
Familiar
Scala (Spark) • JavaScript

FRAMEWORKS

Deep Learning
PyTorch • Keras • Tensorflow
Visualization
d3 • plotly

LANGUAGES

Fluent
Danish • French • English
Intermediate/Beginner
German • Spanish

LINKS

github.com/EmilienDupont
bl.ocks.org/EmilienDupont
linkedin.com/in/emiliendupont

EXPERIENCE

SCHLUMBERGER | MACHINE LEARNING SCIENTIST

June 2016 – Current | Menlo Park, CA

- Created, implemented and deployed machine learning algorithms to solve problems in time series, vision, NLP and geology, improving state of the art for several tasks
- Research in unsupervised deep learning with a focus on deep generative models and learning interpretable representations

GUROBI OPTIMIZATION | SOFTWARE ENGINEERING INTERN

June – Aug 2015 | Palo Alto, CA

- Researched, formulated and solved integer optimization models for a wide area of industry applications including energy, telecom and medicine
- Developed interactive visual web apps (**d3**, **Python**) to easily modify and solve complex optimization models

DTU COMPUTE | RESEARCH ASSISTANT

July – Sep 2013 | Lyngby, Denmark

- Developed a sparse spectral PDE solver in **MATLAB** improving speed by a large factor for certain classes problems.

PROJECTS

DEEP LEARNING PAPER IMPLEMENTATIONS

Implemented algorithms from various papers including Wasserstein GAN GP , InfoGAN and VAE with concrete distribution in Pytorch, Keras, Tensorflow .

VISUALIZING OPTIMIZATION IN DEEP NEURAL NETS

Personal **project** to explore different ways of using random matrix projections to visualize optimization trajectories in Deep Learning using **Keras**, **Tensorflow** .

DISTRIBUTED MAX-FLOW IN SPARK

Created a distributed algorithm to solve the Max-Flow problem which considerably improved the runtime over sequential algorithm. Implemented this in **Apache Spark** and **Scala** and ran on large graphs (million edges). Link to **report** and **github** .

AWARDS

Digital Forum Innovation Award

Schlumberger award for most innovative project among 300+ submissions

Schlumberger AI Leader

Elected as leader of the 1000+ AI community within Schlumberger

Governor's Prize

Ranked 1st of 206 students in Physics at Imperial College London

INVITED TALKS

Deep Learning for Prognostics and Health Management Tutorial , Prognostics and Health Management Conference, 2017

Deep Learning Applications Panel , Prognostics and Health Management Conference, 2017