Edward Beeching

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Nationality: British
Date of Birth: 8th of March, 1986
Place of Birth: Bath, United Kingdom

EDUCATION

MSc Machine Learning & Data Mining *Aug. 2016 - July 2018*
University of Jean Monnet (Saint-Étienne)
Year 2: Erasmus semester at KU Leuven, Belgium.

- Machine Learning
- Natural Language Processing
- Genetic Algorithms
- Neural Networks
- Speech Recognition
- Neural Computing
- Wavelets with applications in Image Processing

Year 1: Semesters 1 and 2. Achieved first place in class rankings.

- Artificial Intelligence
- Advanced Algorithms
- Computer Networks
- Data Mining
- Complexity Theory
- Data Analysis
- Computer Vision
- Optimization
- Intro to Machine Learning
- The Semantic Web
- Machine Learning
- Internship

BSc Physics with Satellite Technology *Sept. 2006 - July 2011*
University of Surrey, Guildford, UK

- Dynamics and control of spacecraft
- General relativity and Cosmology
- Final year project
- Mathematics
- Mathematical and Quantum Physics
- Light and matter
- Physics of uncertainty
- High energy physics
- Relativity
- Modern Physics
- Specialist Physics
- Mathematical Methods
- Space missions
- Experimental Physics
- Classical Physics

A-Levels (baccalaureate) *Sept. 2002 - July 2005*
Hayesfield School, Bath, UK

- Mathematics
- Physics
- Chemistry
- Photography

EXPERIENCE

Research Intern: Deep Reinforcement Learning *Feb. 2018 - Aug. 2018*
INSA CITI Laboratory, Chroma team. Lyon, France
Supervisors: Christian Wolf, Olivier Simonin, Jilles Dibangoye, Laetitia Matignon

- Implemented Deep Reinforcement Learning Agents to solve simulated labyrinth environments.
- Created Deep Convolutional and Recurrent Neural Networks in the PyTorch framework.
- Implemented Deep RL algorithms such as Q-learning and Advantage Actor Critic.
- Created custom scenarios to test AI agents in various navigation tasks.
- Ongoing work: Implementation of Spatially Structured Deep RL agents.

Research Intern: Machine Learning and Signal Processing *March 2017 - Aug. 2017*
Acoem, Department of Innovation. Lyon, France.
Supervisor: Christophe Thirrard

- Applied unsupervised pre-processing to wind turbine accelerometer data with a combination of signal processing, principal component analysis and clustering.
- Created Deep Neural Networks with TensorFlow to detect and classify wind turbine defects.

Senior Geophysicist & Project Leader *July 2011- Aug. 2016*
Petroleum Geo-Services. Weybridge, UK.

- Managed onshore and offshore teams of up to 8 on seismic data analysis and processing.
- Tested seismic processing solutions including numerous signal and image processing algorithms.
- Ran HPC on the 12th most powerful supercomputer in the world (Cray XC30).
- Collaborated with clients such as BP, Statoil, BG Group, Apache, Noreco & Perenco.
- Resource allocation and risk management, managing clients and stakeholders.
- Peer review of technical presentations detailing results from seismic processing and imaging.

Intern: Junior Geophysicist *July 2009- August 2010*
Petroleum Geo-Services. Weybridge, UK.
Supervisor: Magdy Sedhom

- Implementated best practice seismic processing and imaging algorithms.
- Created of technical presentations detailing results seismic signal and image processing.
- Minuted and reported on client meetings.
- Performed quality control of results of processing.

TECHNICAL STRENGTHS

Programming Languages	Python, Java, C++ & Matlab
Deep Learning Frameworks:	PyTorch, TensforFlow, Keras
Machine Learning Frameworks:	Sklearn, tsfresh, HMMlearn
Scientific Frameworks:	SciPy, NumPy, Pandas, Matplotlib
Languages	English (native) & French (intermediate)

PUBLICATIONS

Co-Author of: *Enhancing 3D SRME to Stop Complex Continental Shelf Slope Topography Obscuring the Seismic Signal.* C.E. Jones et al.