

Karolis Jankauskas

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Experienced Data Scientist and Operational Researcher with a Doctor of Philosophy (PhD) focused in Biochemical Engineering from UCL. Skilled in Python, C++, Machine Learning, Evolutionary Programming, Mathematical Programming, and Data Mining and Analysis.

EDUCATION

UCL, London, UK, 2014 – 2018

PhD, Biochemical Engineering

Sponsored by *Eli Lilly & Co.* to develop a tool for stochastic, multi-objective capacity planning and scheduling of biopharmaceutical production across multiple sites.

- Accomplishments*
- Awarded Year 1 Research Project Prize for Best PhD Project and Poster (UCL).
 - Developed a novel, continuous-time Genetic Algorithm (GA) and Particle Swarm Optimisation (PSO) based method for capacity planning and scheduling. **Presented at the 28th European Conference on Operational Research (EURO), Poznan, Poland, 2016.**
 - Developed a tool based on multi-objective GA and GPU-accelerated Monte Carlo for capacity planning and scheduling of multi-product biopharmaceutical facilities under uncertain product demand. **Presented at the 253rd American Chemical Society (ACS) National Meeting, San Francisco, USA, 2017.**
 - Gave a **keynote lecture** on my work at the **27th European Symposium on Computer Aided Process Engineering (ESCAPE 27), Barcelona, Spain, 2017.**

UCL, London, UK, 2010 – 2014

Master of Engineering (MEng), Biochemical Engineering, First-Class Honors

- Accomplishments*
- Received **Jacobs Engineering Design Project Prize for Outstanding Team Effort** for a Year 3 Design Project. The project included aspects of project scheduling, economic appraisal, and sensitivity analysis to predict the impact of uncertainties.

Udacity, 2017 – 2018

Nanodegree, Artificial Intelligence, Certificate of Completion

Implemented and applied Deep Learning (Convolutional Neural Networks, Recurrent Neural Networks, and other advanced models) on a variety of different topics including Computer Vision and Natural Language Processing. List of projects is available at www.github.com/karolisjan/AIND.

EXPERIENCE

Data Scientist,

Picasso Labs, London, UK, 2017 February – present

Developing a large-scale computer vision (CV) and machine learning (ML) based pipeline for recommending visual content to individual brands to use on social media.

Highlights

- Developing statistical models to understand the relationship between the various semantic image attributes, the time the it was posted, and its performance, i.e. engagement or impressions.
- Investigated US online media bias by web scraping over 5000 news articles and images from 12 different websites, performing topic extraction, and applying CV and ML to classify facial expressions.

Teaching Assistant

UCL Biochemical Engineering Dept., London, UK, 2015 September – present

Supervising research projects and teaching Bioprocess Systems Engineering course to MEng and MSc Biochemical Engineering students. Specific course highlights include Discrete-Event Simulation, Mathematical Programming, Meta-Heuristics, and Multi-Criteria Optimisation.

Consultant

Sphere Fluidics Ltd, Cambridge, UK, 2014 June – 2014 August

Developed models to characterize different microfluidic cell sorter designs for a novel single-cell screening and analysis system.

Research Associate

UCL Advanced Centre for Biochemical Engineering, London, UK, 2013 June – 2013 August

Worked on the optimisation of virus-like particles (VLPs) production from *Pichia pastoris* cell expression system for a universal influenza vaccine.

Accomplishments

- Received **Head of Department Commendation Award**

SKILLS

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|---------------------|-----------------------------------------------|
| ▪ C/C++ and CUDA | ▪ Genetic Algorithms and Programming |
| ▪ Python and Cython | ▪ Mathematical Programming |
| ▪ R | ▪ Multi-Objective and Stochastic Optimisation |
| ▪ Julia | ▪ Statistical Analysis and Hypothesis Testing |
| ▪ GAMS | ▪ Data and Web Mining |
| ▪ MATLAB | ▪ Computer Vision |
| ▪ SQL | ▪ Natural Language Processing |