Jan Matas

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Education

Oct 2014 – *Oct 2018*

Imperial College London

MEng Computing (Artificial intelligence)

Achieved grade: *87.5% - **best overall result in the class***

Governors' prize for top graduating student with MEng degree in 2018

Formicary Software Engineering Prize for excellent examination performances in Software Engineering

Tensor society mathematics for engineers prize for best performance in Mathematics by a second year student from the City and Guilds College or the Royal School of Mines

Other: G-Research prize (twice), Morgan Stanley IT prize, Department of Computing Entrance Scholarship

Publications

- Matas, J., James, S., Davison, A.J. (2018). **Sim-to-Real Reinforcement Learning for Deformable Object Manipulation**. in Conference on Robot Learning (CORL) 2018

Work Experience

Aug 2018 – *now*

Two Sigma — *London, United Kingdom*

Software Engineer

- Implemented new execution scheduler significantly increasing model prediction speed (Java)
- Adapted internal build mechanisms to work with new Python APIs

Mar 2017 – *Oct 2017*

Palantir technologies — *London, United Kingdom*

Software Engineering Intern

- Full stack development of data analytics tool for a customer (Java, Typescript, ElasticSearch)
- Implemented recommendation system based on the content similarity of analyzed documents
- Significantly improved search relevance and performance, improved data pipeline reliability
- Iterated with users on functionality and UX of multiple features during onsite visits

Jul 2016 – Sep 2016

Google — *Zurich, Switzerland*

Site Reliability Engineering Intern

- Created a system for analyzing per video resource usage in YouTube ContentID system
- Built an AB load-testing infrastructure using traffic replays for a new ContentID index

Summer 2014 – *Summer 2015*

Apis spol. s.r.o., — *Banska Bystrica, Slovakia*

Summer Intern

- Independently created a system of virtual gates for employee monitoring in medical storage rooms
- Written a Raspberry Pi program able to count and identify people using webcam feed, depth cam feed and custom RFID antennas (Python, OpenCV)
- Developed a web application to process the acquired data and show it to the user (NodeJS, AngularJS)

Notable Projects

- Learning end-to-end robotic manipulation of deformable objects (Python, Tensorflow, Physics simulators)
  - **People's choice award** for best final year project (selected by academics and industry guests) - https://arxiv.org/abs/1806.07851
- Global Air Traffic Management For UAVs - in association with Altitude Angel and Microsoft (C#, Python)
  - **Palantir Forward Group Project Prize** for outstanding third year group project - https://bit.ly/2uXJSCs
- Neural networks - character recognition and traveling salesman problem using recurrent neural network (Java)
  - **CPP prize for best project in category**, team leader (5 imperial students)
- AREROS - autonomous rescue robotic system able to navigate in dangerous environments
  - **Intel ISEF 2012** – Finalist, **World championship in robotics RoboCup jr.** 2011 - 1st place
- OTHER: Snake (ARM assembly), Compiler written from scratch (TypeScript), Webdashboard for managing IoT devices (Javascript, NodeJs), Pintos - toy operating system (C), meetinthemiddle.me - flight searches for long distance couples (JS, Python, Flask), Galopper 3000 - FPS game controller based on MS Kinect and smartphone IMU (Python, Java, OpenNI, OpenCV)

Skills

Programming languages:	Python - 5, Java - 4, JavaScript/Typescript - 3, C - 2, Erlang - 2, Haskell - 2
Technical:	Tensorflow, Keras, React, ElasticSearch, Spark, OpenCV, Cloud (AWS, Azure), Kafka, Git, Linux, Bash, SQL, HTML5, CSS3, Testing frameworks (JUnit, unittest)
Languages:	English (CAE, IELTS 8.0), French (state examination), Slovak, Czech