

Iman Malik

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22 • Female • Montréal, QC

My research interests are in probabilistic machine learning. I am particularly interested in balancing the interpretability and expressivity of deep generative models. Teaching is also something I am very passionate about.

EXPERIENCE

ELEMENT AI

APPLIED RESEARCH SCIENTIST

Mar 2018 - Present

- Working on uncertainty quantification for deep learning models
- Researched and implemented novel latent space visualisation algorithm for AR glasses
- Worked on data augmentation using GANs
- Worked on time-series forecasting
- Teaching an "Intro to AI" class

UNIVERSITY OF BRISTOL

RESEARCH ASSISTANT

Jul 2017 - Oct 2017

- Researched methods of enhancing interpretability of latent variable models.

JP MORGAN CHASE & CO.

TECHNOLOGY SUMMER ANALYST

Jun - Aug 2016

RBC CAPITAL MARKETS

TECHNOLOGY SUMMER ANALYST

Jun - Aug 2015

EDUCATION

UNIVERSITY OF BRISTOL

MENG COMPUTER SCIENCE

Oct 2013 - Jun 2017

First Class Honours ≈ GPA 4.00

A-LEVEL/IGCSES

SELF-TAUGHT IN SAUDI ARABIA

Sept 2011 - June 2013

VOLUNTEER WORK

DIGIMAKERS

UNIVERSITY OF BRISTOL

July 2017 - Oct 2017

These workshops aim to inspire young children by providing an introduction to Computer Science.

SCHOOL TUTOR

TEHAMA INTERNATIONAL SCHOOL

Sept 2011 - Jun 2013

I supported IGCSE and A-Level students by teaching and providing one-on-one tuition.

PUBLICATIONS

BODIN E, MALIK I, CAMPBELL N.& EK C

Nonparametric Inference for Auto-Encoding Variational Bayes

NeuRIPS Approximate Inference Workshop 2017 [arXiv:1712.06536](https://arxiv.org/abs/1712.06536)

MALIK I & EK C

Neural Translation of Musical Style

NeuRIPS Machine Learning for Creativity and Design Workshop 2017 [arXiv:1708.03535](https://arxiv.org/abs/1708.03535)

TECHNICAL SKILLS

EXPERIENCED

Python • Tensorflow • PyTorch • Bash • HTML & CSS
• JavaScript • \LaTeX • Matlab • Pandas

FAMILIAR

C/C++ • Ruby • Haskell • Java (+ Android SDK) • OpenCL
• MPI • OpenMP • OpenCV (C++/Python)

ACHIEVEMENTS

2017 Teaching Assistant for Machine Learning

2017 Teaching Assistant for Computer Graphics

2016 Top marks in Computational Bioinformatics and Computer Graphics.

2014-16 E&D Officer of the Computer Science Society.

2014 Selected for the Schlumberger Women in Technology programme.

2013 Started university at the early age of 17.

RECENT PROJECTS

FINAL YEAR MASTER'S PROJECT

"NEURAL TRANSLATION OF MUSICAL STYLE"

Jan 2017 - May 2017

Designed a neural network architecture called StyleNet for the purposes of learning musical style through the dynamics of music.

GAMES PROJECT

"ROLLOUT"

Sept 2015 - May 2016

Developed an augmented reality robot battle brawler game.

GENETIC ALGORITHM PROJECT

Sept 2016 - Dec 2016

Researched, designed, and implemented a genetic algorithm for optimising the Capacitated Vehicle Routing Problem.

ROBOTICS PROJECT

Sept 2016 - Dec 2016

Developed a particle filter for localising a real-life robot.

HIGH PERFORMANCE COMPUTING PROJECT

Sept 2015 - Jan 2016

Optimised computationally expensive code for Lattice-Boltzmann problems using OpenMP, OpenMPI, and OpenCL on the university's supercomputer, BlueCrystal.

TALKS

MONTRÉAL ALL-GIRL HACK NIGHT

Invited Speaker

Talk on "AI + Music".

PYDATA CONFERENCE (WARSAW 2017)

Invited Speaker

Talk on "Neural Translation of Musical Style".

COMSM0018 DEEP LEARNING UNIT

Invited Speaker

Talk on "Neural Translation of Musical Style".

REFERENCES

SUPERVISOR

Dr. Carl Henrik Ek
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