

# Iman Malik

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21 • Female • Montréal, QC

*My research interests lie at the intersection of machine learning and music. I want to augment the creative process to allow humans to better express themselves by collaborating with AI.*

## EXPERIENCE

### ELEMENT AI

APPLIED RESEARCH SCIENTIST  
Mar 2018 - Present

### UNIVERSITY OF BRISTOL

RESEARCH ASSISTANT  
Jul 2017 - Oct 2017

### 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 the next generation of technical innovators 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 (2017)*  
[arXiv:1712.06536](https://arxiv.org/abs/1712.06536)

MALIK I & EK C  
*Neural Translation of Musical Style (2017)*  
[arXiv:1708.03535](https://arxiv.org/abs/1708.03535)

## TALKS

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".

## TECHNICAL SKILLS

### EXPERIENCED

Python • C • Tensorflow • Matlab • PyTorch • MPI • OpenCL  
Bash • OpenMP • OpenCV • HTML & CSS •  $\LaTeX$

### FAMILIAR

Ruby on Rails • Haskell • R • JavaScript/Node.js  
Java (+ Android SDK) • SQL

## 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. The Piano dataset was created for the purposes of learning musical style.

### GAMES PROJECT

#### "ROLLOUT"

Sept 2015 - May 2016

Developed an augmented reality robot battle brawler game in a team of six. The game included two spherical robots in a projected virtual arena.

### 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.

## HOBBIES

DANCE Performer in the Bollywood Dance Society.  
MUSIC Creating experimental/electronic music.  
YOUTUBE [Algorithm Channel](#) on YouTube.

## REFERENCES

SUPERVISOR Dr. Carl Henrik Ek  
[carlhenrik.ek@bristol.ac.uk](mailto:carlhenrik.ek@bristol.ac.uk)