

# Iman Malik

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21 • Female • Bristol, U.K

*I want to understand what constitutes the human identity. Once we have a representation of the human identity, we can apply it to different creative pursuits such as music, art, and expression. In this way, we are bridging the gap between human expression and artificial intelligence.*

## EXPERIENCE

### UNIVERSITY OF BRISTOL

RESEARCH ASSISTANT  
Jul 2017 - Present

### 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  
- AAAB in Mathematics, Physics, Chemistry and Biology A-Level.  
- 6A\*AB in English, Chemistry, Biology, Physics, Geography, ICT, Mathematics, and Urdu IGCSE.

## VOLUNTEER WORK

### DIGIMAKERS

#### UNIVERSITY OF BRISTOL

July 2017 - Present  
My duties include organising and planning workshops for children. 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

#### MALIK, I. & EK, C. H.

*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 • 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 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. A dataset called the Piano dataset was created for the purposes of learning musical style. The research concluded that StyleNet's musical performances successfully pass a musical Turing test; the designed architecture can successfully synthesise the dynamics of sheet music.

### GAMES PROJECT

#### "ROLLOUT"

Sept 2015 - May 2016

Developed an augmented reality robot battle game in a team of six. The game included two spherical robots in a projected virtual arena. Challenges included producing a real-time tracking system using image processing while working within the constraints of the colours and objects in the game environment. Other contributions included game design, and creating a 3D sound system suitable for public showcasing.

### 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)