# Anagh Malik

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## EDUCATION

University of Toronto

PhD in Computer Science

Sep. 2022 - Sep. 2026 Supervised by Prof. David Lindell.

Imperial College London

MRes Machine Learning

• Supervised by Prof. Andrew Davison and Dr. Ronald Clark, working on Self-Supervised Computer Vision

Imperial College London

BSc Mathematics • 3rd Year: Grade: 88.11%, Dean's List, G-Research Prize for Academic Excellence, Ranked 5th

• 2nd Year: Grade: 90.38%, Dean's List, Ranked 2nd

• 1st Year: Grade: 80.71%, Top 15%

III LO im. Marynarki Wojennej RP w Gdyni

High School International Baccalaureate

• 41/45 — Higher Level: Mathematics, Physics, English — Standard Level: Philosophy, Geography, Polish

• Extracurricular Activities: Olympiad Mathematics Club, Volleyball Team, Debate Club, Band Drummer

## Experience

Researcher

Nate

## Cognitive Robotics Group, Imperial College London

Worked on Automatic Curriculum Design on the Animal-AI testbed

• Inspired by research papers designed and implemented a student-teacher setup to train a DRL agent

• Research under Dr. Matthew Crosby at Prof. Murray Shanahan's Cognitive Robotics group

Aug. 2019 – Dec. 2019

London, UK

Gdynia, Poland

London, UK

Toronto, Canada

Oct. 2021 - Sept. 2022

Oct. 2018 - July 2021

Sept. 2015 - June 2018

Aug. 2020 - Oct. 2020

London, UK

London, UK

Gdynia, Poland

Machine Learning Researcher

• Worked on a page classifier using NLP techniques (Tensorflow, Keras)

Created an automatic reward generating function for a DRL agent

- Designed and implemented a new model for checkout automation (in the process of being patented)
- Gave a lecture to other engineers on the Wasserstein GAN and Information Theory

## HandsOnTable

July 2017 - Aug. 2017, Mar. 2019

Summer Research Intern • Developed and investigated the algorithm behind the "Select All" function in Excel - like spreadsheets

- Gave a lecture about the algorithm to 10 engineers on the implementation, design and efficiency
- Created a web scraper for data collection using Python and Selenium

## Projects & Activities

## Research Project - 'Squared Music'

Created a song using a novel map from integers to notes and the x-squared function

TriMat 2017 - Mathematics Conference

Gave a lecture to over 100 people on the Konigsberg Bridge Problem and introduced the concept of Graph Theory

TriMat 2016 - Mathematics Conference

Gave a lecture to over 50 people on the Chinese Remainder Theorem and its use in Olympiad style Mathematics

Research Paper - 'Effect of Wind on Projectile Motion'

Wrote, solved multiple differential equations and used Lambert's W function to find closed-form expressions

Google DevFest - Presenter

Presented the Hackathon winning project during the Google developers festival

## SKILLS

Languages: Hindi – native, Polish – native, English – native

Technical Skills: Latex - proficient, Python - proficient, Git - proficient, Unix - proficient, Matlab - basic

### AWARDS

### G-Research Prize for Academic Excellence

Oct. 2021

1st Place in ICHack Jan. 2019 Built a lecture based interactive 3D AR visualiser. Worked on interaction with the 3D model (rotations and zoom) in Unity using C#

1st Place in AIHack Nov. 2018

Built an accurate neural network predicting severity and number of casualties of an accident

Nov. 2018

1st place in G-Research NLP Coding Challenge

Scholarship for All Round Excellence, Pomeranian State of Poland

Oct. 2017

Scholarship for Academic Excellence, President of Gdynia, Poland

Oct. 2017