

# Harrish Thasarathan

## EDUCATION

### B.S. Computer Science - Co-op

Ontario Tech University (University of Ontario Institute of Technology)  
Graduating: 2021, Oshawa ON

## SKILLS

Python • PyTorch • Tensorflow  
• Java • C++ • Flutter • Git  
Android • LATEX • Data structures • Software Design Patterns

## COURSEWORK

Data Structures  
Analysis and Design of Algorithms  
Scientific Data Analysis  
Mobile Development  
Graphics and Visualization  
Software Design and Analysis,  
Software Systems Dev. & Integ.

## LINKS

<https://www.linkedin.com/in/harrish-thasarathan/>  
<https://bit.ly/32OeQhl>  
<https://github.com/Harry-Thasarathan>

## PROJECTS

### Video Colorization with Generative Adversarial Networks

Python | PyTorch | NumPy | Scikit-Learn | OpenCV May. 2017 – Present

- Performed image to image translation of grayscale/line-art frames to fully colored frames with Conditional GANs using residual blocks, patch based discriminators and perceptual loss
- Developed architecture modifications to preserve Spatio-Temporal information in video
- Led to publication at ICCV'19 workshop (<https://bit.ly/32OeQhl>) and at CRV'19 (<https://arxiv.org/abs/1904.09527>)

### Full Stack Group Video Chat Mobile Application

Flutter | Firebase | Dart | Agora February 2019

- Led 4 person team develop a full stack android mobile application to enable group video chat and text messaging with a scalable cloud database backend
- Released as open source project receiving 99 stars on Github

### Edge-Informed Single-Image Super Resolution

Python | PyTorch | NumPy | SciPy | OpenCV December 2019

- Developed a two-stage structure guided inpainting model for single-image super-resolution that leverages deep generative neural networks to jointly optimize image content and structure
- Led to publication (<https://arxiv.org/abs/1909.05305>) at ICCV'19 workshop in Advances in Image Manipulation

### Deep Learning User Interface Demo

Java | DL4J | Python December 2018

- Collaborated with students on building a Deep Learning Demo UI to introduce students to computer vision and machine learning techniques for recognition and generation tasks

## EXPERIENCE

### Research Fellow, Vision Lab

Aug. 2017 – Present

Ontario Tech University (University of Ontario Institute of Technology),  
Oshawa ON

- Conducted original research in the area of GANs for assisting humans in animation colorization and image editing
- Developed tools for animators to leverage state of the art models to speed up workflows creating interest from animation studios
- Delivered multiple presentations to both technical and non-technical crowds on deep learning and deep generative modelling