

# NICHOLAS IOANNIDIS

@ nicholasioannidis98@gmail.com

in linkedin.com/in/nickioan

github.com/nickioan

## WORK EXPERIENCE

### Research Assistant

#### UBC Canary Cognition Research

September 2021 - Present

**Summary:** Multidisciplinary research group using eye-tracking and speech data to develop Alzheimer's disease classification models

- Implemented and trained transformer models such as BERT and Roberta
- Conducted literature review on fine-tuning techniques for transformers
- Implemented fine-tuning techniques and improved performance of baseline transformer models

### Research Assistant

#### UBC Computer Science - Mark Schmidt's Lab

May 2021 - August 2021

**Summary:** Explore different sampling methods for off-policy reinforcement learning in continuous control

- Conducted literature review on related work
- Designed and developed experiments for the research using PyTorch
- Trained multiple agents on Mujoco benchmarks using DeepMind Control Suite on high performance computing
- Cowrote paper and got published in NeurIPS 2021 Deep RL Workshop

### ML Engineer

#### UBC MRI Research Centre

June 2020 - April 2021

**Summary:** Develop software to identify and segment micro-structures such as microbleeds from MRI brain scans

- Implemented and trained on different architectures for volumetric segmentation such as 3D U-nets and V-nets in PyTorch
- Studied physical properties of microstructures in order to generate synthetic ones
- Augmented sparse dataset by populating scans with synthetic microstructures using Matlab and Julia

### IoT Software Engineer

#### CraftMetrics

January 2019 - May 2019

**Summary:** Design backend for IoT startup company and improve upon existing data-analytics system

- Developed server based applications in Go that automated company processes
- Created Docker container for Back-End implementation
- Optimized in Python the existing data pre-processing algorithm which reduced the residual standard error by 2%

## PUBLICATIONS

An Empirical Study of Non-Uniform Sampling in Off-Policy Reinforcement Learning for Continuous Control

N Ioannidis, JW Lavington, M Schmidt

Deep RL Workshop, NeurIPS 2021

## EDUCATION

Bachelor of Applied Science, Engineering Physics

UBC

September 2017 - Present

Minor in Honours Mathematics

UBC

September 2019 - Present

## TECHNICAL SKILLS

Languages:	Python, C++, Julia, Matlab, Go
Frameworks:	PyTorch, TensorFlow, ROS
Containers:	Singularity, Docker
Databases:	MySQL, SQLite, InfluxDB
OS:	Macintosh, Windows, Linux
Microcontrollers:	STM32, Raspberry Pi, Arduino

## TECHNICAL PROJECTS

### Software Lead

#### UBC Open Robotics

June 2019 - April 2021

**Summary:** Multidisciplinary engineering design team that aims to develop service and assistive robot technology highly relevant for personal domestic use

- Software lead of UBC's Robotics design team with which we participated in the 2020 and 2021 International Robotics Competition Robocup@Home Education
- Awarded second place and people's choice award in 2020 and reached the finals in 2021 Robocup@Home Education Challenge
- Implemented Computer Vision and NLP algorithms for human interaction tasks while integrating them with robotic hardware and ROS