

IGNAT GEORGIEV

Robotician | Machine Learning | Motion Control



ABOUT ME

Enthusiastic, dedicated and hard-working student graduating my from my Master's in 2020. I am passionate about robotics and believe that with the help of AI they will cause the next industrial revolution, and I would like to be part of it! This belief led me to establish an autonomous racecar student project within my university.

CONTACT ME

Phone

+44 07561 076116

Email

ignat.m.georgiev@gmail.com

Website

imgeorgiev.com

GitLab

gitlab.com/imgeorgiev

LANGUAGES

English - proficient

Bulgarian - proficient

German - beginner

WORK EXPERIENCE

Jun - Sept 2019 SOFTWARE ENGINEER INTERN @ ROBORACE

Developed a reference **autonomous driving software stack**. Involved in a variety of projects incl. **software deployment, localisation, motion planning & control and optimization**.

2017 - 2018 INTERN @ INDIE SEMICONDUCTOR

Worked on firmware development for custom microcontrollers for IoT and automotive applications.

EDUCATION

2015 - 2020 MSC INFORMATICS @ UNIVERSITY OF EDINBURGH

Focus on Robotics Machine Learning and Optimal Control. Exposure to Physics, Electronics, IoT and RL
Dissertation on Dynamic Path Planning and Control for an Autonomous Racecar using Reinforcement Learning and online model adaption

Online courses

Self-driving Car Engineer Nanodegree @ Udacity
Autonomous Mobile Robots @ ETH Zurich
Artificial Intelligence for Robotics @ Udacity
Deep Learning Specialisation @ Coursera

PROJECTS

Established an autonomous racecar student project to participate in the international **Formula Student** competition. Led a passionate team of about 40 students for 3 years and 2 victories in the UK competition, raising a budget of over £50,000. This allowed me to obtain **practical hands-on experience** in CNN-based camera object detection, multi-sensor object fusion, redundant EKF vehicle state estimation, online FastSLAM with active loop closing, offline trajectory optimisation and a non-linear MPC. Through that I have also developed my **team working, management, leadership and communication skills**.

Built and programmed my own racing drone capable of reaching 160 kph. Actively contributing to an **open-source drone flight control software**.

Developed an **end-to-end Reinforcement Learning algorithm** to drive a car in simulation based only on camera images.

Designed an embedded **IoT Weather Widget** for home automation.

SKILLS

C/C++

Python

ROS

CUDA

PyTorch

Tensorflow

VC / git

CI & CD

Deep Learning

Operating systems (UNIX)

Parallel programming

Robotics simulators