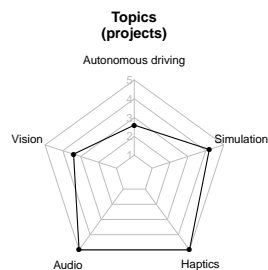
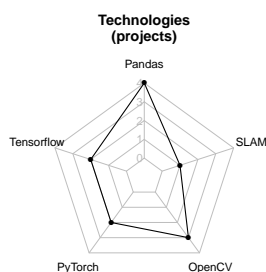
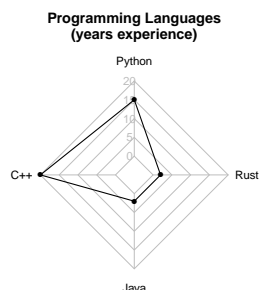


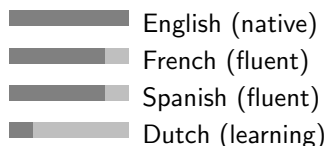
STEPHEN SINCLAIR

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Language skills



Abilities

- Team
- Leadership
- Research
- Communication

Introduction

I have worked throughout my career on high tech projects crossing disciplinary boundaries. My background in computer science, music technology and haptics, has given me a strong skill set at the intersection of signal processing, real-time systems, machine learning, simulation, and robotics.



Keywords Software, scientist, perception, interaction, robotics, deep learning.

Project experience

AI/Machine learning

2022 Few-shot traffic sign classifier (Navinfo) `ST+VQGAN` `Python` `PyTorch`

2021 Highway topology from images (Navinfo) `LSTM+CRF` `Python` `PyTorch`

2020 Volumetric segmentation and deformation analysis for skin images (URJC) `Elastix` `Python` `TensorFlow`

2018 Realtime neural audio HRTF synthesis (Enosis VR) `C++` `Unity`

2018 Adversarial autoencoder audio synthesis (Inria) `Python` `TensorFlow`

Computer vision

2022 Traffic sign localization (Navinfo) `Python` `Pandas` `OpenCV` `SLAM`

2021 Highway scenario understanding (Navinfo) `Python` `Pandas` `OpenCV`

Haptics

2019 Optimisation control of haptic ultrasound array (URJC) `C++` `Python`

2019 Force sensors for skin tomography experiment (URJC) `Electronics`

2015 Displacement triggers for tribometry experiment (UPMC). `Electronics` `Xenomai` `Python`

2012 Haptic-audio interaction, filter optimization (Masters, PhD) `C++` `Embedded DSP` `Python`

2004 Drivers for 6-DOF haptic arm (MPBT) `C++` `Java` `Xenomai` `Kernel`

Robotics simulation

2017 Physics backend for Gazebo (Inria Chile). `C++` `Python`

Employment history

2019–2022 Navinfo Europe, contractor, senior software engineer.

2018–2019 Uni. Rey Juan Carlos, senior research fellow.

2015–2018 Inria Chile, research software engineer.

2013–2015 Inst. Systèmes Intelligentes. Robotiques (Paris 6), research fellow.

2005–2012 McGill University, grad student.

1998–2010 MPB Technologies Inc., software engineer (part time, 2004 full).

Education

2005–2012 McGill University, (Montreal, Canada). PhD, Masters.

2001–2004 Concordia University, (Montreal, Canada). B.CompSci.