Edward James Smith

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Education:

Doctorate of Science, Computer Science   2018 -
McGill University, Montreal, QC

Masters of Science, Computer Science   2016 - 2018
McGill University, Montreal, QC

Bachelor of Science, Mathematics and Computer Science   2013 - 2016
First Class Honours
McGill University, Montreal, QC

Diplome d'Etudes Collegial (DEC), Applied Sciences   2011 - 2013
Marianopolis College, Montreal, QC

Skills:

Programming Languages: Python, C, C++, CUDA, SQL,
Frameworks and Tools: PyTorch, Tensorflow, Caffe

Experience:

Visiting Researcher at Facebook AI Research   Oct 2019 -
Facebook, Montreal, QC
- Specializing in 3D Deep Learning
- Robotic haptic 3D object interaction

AI Research Intern at NVIDIA   Mar - Aug 2019
NVIDIA Development, Toronto, ON
- Specializing in 3D Deep Learning
- Learning 3D geometry through implicit representations
- Differentiable rendering for 3D reconstruction and generative modeling without 3D supervision

Research Student at The Mobile Robotics Lab   Dec 2016 -
MRL McGill, Montreal, QC
- Specializing in 3D Deep Learning
- Object and scene shape understanding
- Robotic haptic 3D object interaction

Research Intern at Wrnch   May - Sep 2016
Montreal, QC
- Developing algorithms for 3D pose estimation from single images
- Software development for image de-noising

Intern at JSS Medical Research   Jun - Sep 2014, 2015
Montreal, QC
- Software development

Teaching Assistant, McGill University   Sep 2016 -
Montreal, QC

Publications:

Eward J Smith, David Meger, Luis Pineda, Roberto Calandra, Jitendra Malik, Adriana Romero, Michal Drozdzal. Active 3D Shape Reconstruction from Vision and Touch. In NeurIPS, 2021. Poster.

Eward J Smith, Roberto Calandra, Adriana Romero, Gerogia Gkioxari, David Meger, Jitendra Malik, Michal Drozdzal. 3D Shape Reconstruction from Vision and Touch. In NeurIPS, 2020. Poster.

Edward Smith, Krishna Murthy Jatavallabhula, Jean-Francois Lafleche, Clement Fuji Tsang, Artem Rozantsev, Wenzheng Chen, Tommy Xiang, Rev Lebaredian, Sanja Fidler. Kaolin: A PyTorch Library for Accelerating 3D Deep Learning Research. 2019. White Paper.

Wenzheng Chen, **Edward J Smith**, Huan Ling, Jun Gao, Jaakko Lehtinen, Alec Jacobson, and Sanja Fidler. Learning to predict 3D objects with an interpolation-based differentiable renderer. In NeurIPS, 2019. Poster.

Edward J Smith, Scott Fujimoto, Adriana Romero, and David Meger. GEOMetrics: Exploiting geometric structure for graph-encoded objects. In ICML, 2019. Long Oral.

Edward J Smith, Scott Fujimoto, and David Meger. Multi-view silhouette and depth decomposition for high resolution 3D object representation. In NeurIPS, 2018. Poster.

Edward J Smith and David Meger. Improved adversarial systems for 3d object generation and reconstruction. In Conference on Robot Learning, 2017. Oral.

Awards:

FRQNT Nature et Technologies Scholarship – Doctoral	**2019 - 2022**
NSERC Graduate Scholarship – Doctoral	**2019 - 2021**
Harold H. Helm Fellowship	**2019**
McGill Graduate Excellence Award	**2016, 2018, 2019**
NSERC Industrial Undergraduate Student Research Award	**2016**
Supplement NSERC Experience Award	**2016**