

Dylan Bourgeois

US & French citizen

04/11/94

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education

09/2016
04/2019 Master of Science & Engineering /speciality Robotics + extra credits in Computational Neuroscience, EPFL

09/2012
06/2016 Bachelor of Science & Engineering /speciality Microengineering, EPFL

06/2012 French Baccalaureate, Scientific specialization & advanced Maths *summa cum laude*

can speak...

proficiency mother tongue English
mother tongue French
fluent Spanish

publications

Learning Representations of Source Code from Structure & Context
Bourgeois, Catasta, Leskovec
TBA

A dynamic embedding model of the media landscape
Rappaz*, Bourgeois*, Aberer
WWW'19

GNNExplainer: Generating Explanations for Graph Neural Networks
Ying, Bourgeois, You, Zitnik, Leskovec
pre-print

Selection Bias in News Coverage: Learning It, Fighting It
Bourgeois*, Rappaz*, Aberer
WWW'18

Using holistic information in the Trigger
Bourgeois, Fitzpatrick, Stahl
LHCb Pub

New approaches for track reconstruction in LHCb's Vertex Locator
Hasse, Albrecht, Couturier, Bourgeois, Coco, Nolte, Ponce
JHEP'18

currently

09/2018 MSc Thesis

07/2019 @ SNAP, Stanford / LTS2, EPFL

Designing a new encoder which learns representations of source code from structure and context. The model can then be fine-tuned to achieve state-of-the-art results on common tasks like naming variables or methods. After a successful defense with honors, this work is currently being pursued for publication and extended with other collaborations within the lab.

Graph Neural Networks - NLP - Representation Learning - Intepretability

python - tensorflow - jupyter

experience

02/2018 Intern

Machine Learning - Large-scale Data Processing

08/2018 @ LHCb Trigger Group, CERN

python - pytorch - jupyter

The aim is to select interesting particle collisions in a processing-friendly and interpretable way, using only low-level detector information. Throughput dropped by 84% on a 30MHz event rate, a gain tuneable based on signal efficiency requirements.

09/2017 Semester Project

Control - Kinematics - Robotics

02/2018 @ RLI, IDIAP

matlab - tango - java - python

Exploring partial joint control on a humanoid robot, which was finalized by an AR interface based on Tango to control the Baxter robot.

02/2017 Semester Project

Recommender Systems - News

06/2017 @ LSIR, EPFL

matlab - python

Identifying correlations in news coverage using Matrix Factorisation methods, usually used in recommender systems. Led to two publications at the WebConf and a funded news observatory project.

02/2016 Intern

Machine Learning - Robotics - Anomaly Detection

06/2016 @ LASA, EPFL

python - ROS

Designing predictive failure detection algorithms for multi-DOF robots. From sensor data, the algorithm predicts 93% of failures in simulated experiments.

06/2016 Intern

Control - Robotics - Odometry

09/2016 @ IRI, UPC-Barcelona

C++ - ROS - Kinect

Extending a visual odometry framework to support inertial readings at a high frequency. This included verifying and implementing IMU preintegration on manifold methods.

09/2015 Intern

Control - Drone - Anomaly Detection

02/2016 @ LIS, EPFL

C++ - Matlab

Implementation of a fast free-fall recovery algorithm for a quadcopter, allowing for emergency stabilization or throw recovery.

references

Michele Catasta Stanford
Postdoctoral Fellow
pirroh@cs.stanford.edu

Conor Fitzpatrick CERN
Research Physicist
conor.fitzpatrick@cern.ch

Jure Leskovec Stanford
Associate Professor
jure@cs.stanford.edu

Pierre Vandergheynst EPFL
VP Education
pierre.vandergheynst@epfl.ch

can do programming

proficiency Main Python
Scholar C(++)
Working Swift/Rust/JS

software

Matlab Solidworks (CAD)
Sketch Gantt Project ROS
Final Cut Pro Premiere Pro
Docker Sklearn PyTorch
Tensorflow Git Jupyter

and also...

Blogger Artifices Intelligents

Le Temps (CH), 2018-2019

Speaker AI+Journalism Workshop

pilote.media, 2019

Speaker ML Workshop

powercoders, 2018

Teaching Assistant

Applied Data Analysis, EPFL, 2017

Head of IT

Satellite, EPFL, 2016-2017

Stage + Music programmer

Sat Rocks, EPFL, 2016

Contributor Signal for iOS

Open Whisper Systems, 2014

Freshman Counselling

EPFL, 2014

Student Assistant CS101

EPFL, 2013

and for fun...

Tennis Running Climbing
Music curation Film editing
Traveling

