Dylan Bourgeois

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+33 (0)7 69 19 98 75
US & French citizen

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 and Context
Bourgeois, Catasta, Leskovec
pre-print

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

MSc Thesis Graph Neural Networks - NLP - Representation Learning - Intepretability
@ SNAP, Stanford / LTS2, EPFL, Sept 2018-July 2019
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, along with other collaborations within the lab.

did it experience

Intern Machine Learning - Large-scale Data Processing
@ LHCb Trigger Group, CERN, Feb-Aug 2018
The aim is to select interesting particle collisions in a processing-friendly and interpretable way, using only low-level detector information. We manage to drop the throughput by 84% on a 30MHz event rate, a gain tuneable based on signal efficiency requirements.

Semester Project Control - Kinematics - Robotics
@ RLI, IDIAP, Sept-Dec 2017
Exploring partial joint control on a humanoid robot. This project was finalized by an AR interface based on Tango to control the Baxter robot.

Semester Project Recommender Systems - News
@ LSIR, EPFL, Feb-Jun 2017
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.

Intern Machine Learning - Robotics - Anomaly Detection
@ LASA, EPFL, Feb-Jun 2016
Designing predictive failure detection algorithms for multi-DOF robots. From sensor data, the algorithm predicts 93% of failures in simulated experiments.

Intern Control - Robotics - Odometry
@ IRI, UPC-Barcelona, Summer 2016
Extending a visual odometry framework to support inertial readings at a high frequency. This included verifying and implementing IMU preintegration on manifold methods.

Intern Control - Drone - Anomaly Detection
@ LIS, EPFL, Sept-Dec 2015
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

can do software

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

and also...

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