Fabio Dias

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Overview

Areas of Expertise: Cloud based software development, data analysis and visualization.

Professionally used technologies: AWS: CloudFormation, IAM, Lambda, Kinesis; Python, React, d3, Git, PostgreSQL.

Work experience

StateStreet Corporation		2019-Present
Cloud Developer		Canada
Public Cloud Platform Engineering Team		

Achievements:

- Creation a new tool to streamline CloudFormation development / deployment for established protocols

Activities:

- Log transfer infrastructure pipeline development
- Code and IAM policy review for security, compliance, and maintainability

Technologies: Python: boto / Lambda, CloudFormation, IAM, CloudWatch logs, SNS, Kinesis, EC2.

University of Toronto	2017-2019
Postdoctoral Fellow	Canada
Urban Genome Project - School of Cities	

Achievements:

- Creation of a new methodology to greatly reduce wrangling for georeferenced data

Projects:

- Geographical socio-economic interactive data exploration (live, code, paper, video)
- Identification of economic mega-regions from satellite images (live, code, blog)

Technologies: Python, CherryPy, Pandas, Keras, JavaScript, React, NLTK, Mapbox-GL.

NYU Tandon School of Engineering	2016-2017
Postdoctoral Fellow	USA
Visual analytics for network urban data	

Achievements:

- Invention of a new clustering method for interconnected data

Projects:

- Hypergraphs for data clustering (code, paper)
- Analysis of dynamic networks (social networks, street networks) (live, code, paper)

Technologies: Python, NetworkX, Scikit-Learn, JavaScript, jQuery, d3.

University of São Paulo   2015-2016
Postdoctoral Fellow   Brazil
Visual analytics for network data

Achievements:

- Demonstrated how network data processing can obtain insights from small datasets

Projects:

- Network data analysis using graph signal processing (live, paper)
- Network simplification via matrix factorization (paper)

Technologies: Python, NetworkX, SciPy, NumPy.

Foundation for Science, Technology and Space Applications   2014-2014
Systems analyst   Brazil
Project: *TerraClass WebGIS*

Activities:

- Software and interface design for an interactive WebGIS to monitor deforestation in the Amazon forest

Technologies: PHP, JavaScript, jQuery, d3, PostgreSQL, PostGIS, Linux server.

University of Campinas   2013-2014
Postdoctoral Fellow   Brazil
Human motion analysis for underwater sports

Achievements:

- Creation of accurate biomechanics analysis software with cheap consumer cameras

Projects

- Camera calibration and motion capture with action cameras or smartphones (code)
- Ancillary contributions: electronic camera controls, server configuration

Technologies: Matlab, basic electronics, Windows server.

Education and Knowledge Enhancement

Ph.D. in Computer Science - Université Paris-Est   2009-2012
A study of some morphological operators in simplicial complex spaces   France
Signal processing, data representation, network data

M.Sc. in Computer Science - University of Campinas   2007-2009
Generalized visual rhythm and tracking in sport images   Brazil
Computer vision, optimization, graphs

B.E. in Computer Engineering - University of Campinas   2002-2006
Information fusion and object tracking in video images   Brazil
Information fusion, fuzzy and probabilistic methods