Darius Coelho

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Education

Stony Brook University — Stony Brook, NY
Ph.D. in Computer Science, Advised by Prof. Klaus Mueller — *Sep. 2012 – May 2021 (Expected)*
(GPA: 3.92 / 4.0)

Goa University (Padre Conceição College of Engineering) — Goa, India
B.E. Information Technology — *Aug. 2007 – May 2011*

Technical Skills

Proficient: Python, JavaScript, HTML/CSS, ReactJS, D3.js

Competent: Flask, R, C/C++, Unity3D, Qt, MATLAB

Experience

Research Assistant *at VAI Lab, Stony Brook University, Stony Brook, NY* — *Sep. 2014 – Present*

- Conducted research and published articles that intersect the areas of visual analytics, data science, information visualization, human-computer interaction, and NLP.
- Developed multiple visualizations and visual analytics interfaces.

Research Engineer Intern *at Akai Kaeru, Stony Brook, NY* — *Jun. 2020 – Aug. 2020*

- Assisted in the design of a COVID-19 dashboard to visually explore risk factors in counties across the United States.
- Assisted in the development of the COVID-19 dashboard.

Teaching Assistant *at SUNY Korea, Incheon, S. Korea* — *Feb. 2013 – Jun. 2013*

- Graded assignments for the Applied Calculus course (AMS 151).
- Assisted with conducting experiments for the Classical Physics Laboratory course (PHY 133)

Awards

Best Paper Runner-up Award at EuroVis 2020 — *May 2020*

Best Paper Award at the Visual Data Science Symposium at IEEE VIS 2019 — *Oct. 2019*

IT Consilience Creative Program Scholarship awarded by the Ministry of Science, ICT and Future Planning (MSIP) South Korea — *Sep. 2013 – Aug. 2016*

PROJECTS

TaskFinder | *Python, Flask, ReactJS, D3.js* — *June 2020 – Present*

Researched and developed a visualization recommender system that combines statistical methods and NLP techniques to identify relevant analytical tasks and associated visualizations to be applied to a given dataset.

PeckVis | *Python, Flask, ReactJS, D3.js, R* — *Jan 2018 – June 2019*

Designed a visual analytics interface that implements various analysis algorithms to analyze animal interaction data for dominance hierarchies and allows analysts to explore the data via a novel visual interface.

Infomages | *C/C++, Qt, Google Custom Search API* — *Mar. 2014 – Nov. 2019*

Researched the design of infomages and developed a windows-based design interface that automates part of the infomage design process. The tool makes use OpenCV to embed data charts into images retrieved from the web.

Share.va | *ReactJS, D3.js, MultiChain* — *Jan. 2016 – Aug. 2019*

Designed a framework to support collaboration with web-based visual analytics dashboards using a blockchain backend.

Contextual Nutrition Labels | *ReactJS, D3.js, Python* — *June 2018 – Aug. 2019*

Designed a visualization to serve as a more informative alternative to current nutrition facts labels.

PUBLICATIONS (SELECTED)

For a complete list of publications please visit my website or my google scholar page.

- D. Coelho, K. Mueller, "Infomages: Embedding Data into Thematic Images," *Computer Graphics Forum*, 2020. (Acceptance rate of 26.8%) ***[Best Paper Runner-Up Award at the EuroVis 2020]***
- D. Coelho, I. Chase, K. Mueller, "PeckVis: A Visual Analytics Tool to Analyze Dominance Hierarchies in Small Groups," *IEEE Transactions on Visualization and Computer Graphics,* 2020. (Acceptance rate of 29.6%) ***[Best Paper Award at the Visual Data Science Symposium (VDS)]***
- D. Coelho, R. Trailor, D. Sill, S. Engle, A. Joshi, S. Mankovskii, M. Velez-Rojas, S. Greenspan, K. Mueller, "Collaborative Visual Analytics Using Blockchain," *International Conference on Cooperative Design, Visualization and Engineering (CDVE)*, 2020
- D. Coelho, Helen He, Maxim Baduk, K. Mueller, "Eating with a Conscience: Toward a Visual and Contextual Nutrition Facts Label," *VisComm: Workshop on Visualization for Communication at IEEE VIS*, 2020
- T. Im, D. Coelho, K. Mueller, P. De, "Smartphone Based Approximate Localization Using User Highlighted Texts from Images," *Pervasive and Mobile Computing*, 2018
- D. Coelho, S. Lee, "Breast and Prostate Cancer Expression Similarity Analysis by Iterative SVM Based Ensemble Gene Selection," *International Workshop on Data and Text Mining in Biomedical Informatics*, 2013