

# Darius Coelho

## EDUCATION

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### **Stony Brook University**

Ph.D. in Computer Science, Advised by [Prof. Klaus Mueller](#)  
(GPA: 3.92 / 4.0)

Stony Brook, NY  
Sep. 2012 – Present

### **Goa University (Padre Conceição College of Engineering)**

B.E. Information Technology

Goa, India  
Aug. 2007 – May 2011

## TECHNICAL SKILLS

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**Proficient:** Python, JavaScript, HTML/CSS, ReactJS

**Competent:** D3.js, Flask, R, C/C++, Unity3D, Qt, MATLAB

## EXPERIENCE

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### **Research Assistant at VAI Lab, Stony Brook University, Stony Brook, NY**

Sep. 2014 – Present

- Conducted research and published articles on topics of visual analytics, data science, information visualization, and human-computer interaction.
- Developed multiple visualizations and visual analytics interfaces.

### **Research 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 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)

## PROJECTS

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### **TaskFinder | Python, Flask, ReactJS, D3.js**

June 2020 – Present

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

Developed 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 visual interface.

**Infomages** | C/C++, Qt, Google Custom Search API

Mar. 2014 – Nov. 2019

Developed a windows-based design interface that automates part of the infomage design process. The tool makes use of Google Custom Search API to retrieve images and OpenCV to embed data charts into them.

**Share.va** | ReactJS, D3.js, MultiChain

Jan. 2016 – Aug. 2019

Developed 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)

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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. [**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. [**Best Paper Award at the Visual Data Science Symposium (VDS)**]
- D. Coelho, R. Traylor, 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
- Q. Vo, D. Coelho, K. Mueller, P. De, "WhereAml: Energy Efficient Positioning using Partial Textual Signatures," *IEEE International Conference on Mobile Services (MS)*, 2015
- 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

## AWARDS

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**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