

Darius Coelho

New York | darius.coelho@gmail.com | [LinkedIn](#) | [Portfolio](#)

EXPERIENCE	Co-founder and Product Lead at <i>12bit AI, New York, NY</i> Mar. 2024 – Present <ul style="list-style-type: none">Co-founded a startup providing high-quality synthetic medical imaging data for medical AI-solutions.Engaged in business development efforts, conducting market research, customer outreach, and investor engagement to refine product-market fit.Managed cloud infrastructure, optimizing AI model performance and researching cost-effective cloud solutions for training and inference.Designed prototype interfaces enabling users to guide our synthetic data generation AI algorithms.
	Founding Software Engineer at <i>Akai Kaeru, New York, NY</i> May 2021 – Mar. 2024 <ul style="list-style-type: none">Collaborated with the CEO and CTO to evolve the product from a Jupyter Notebook prototype into a full-featured React app with a Python backend..Designed and implemented a novel data-centric UI, reducing onboarding time by 80%.Optimized performance, implementing new features and data structures to cut load times by 40%.
	Research Assistant Professor at <i>Stony Brook University, Stony Brook, NY</i> Sep. 2021 – Present <ul style="list-style-type: none">Supervised graduate student research in the areas of Visual Analytics and Human-Computer interaction.
	Research Intern at <i>Akai Kaeru, Stony Brook, NY</i> Jun. 2020 – Aug. 2020 <ul style="list-style-type: none">Developed an interactive COVID-19 dashboard to explore risk factors identified by mining algorithms.Created data visualizations that improved risk pattern comprehension while reducing the UI footprint by 60%.
EDUCATION	Stony Brook University , Stony Brook, NY Sep. 2012 – May 2021 Ph.D. in Computer Science, Advised by Prof. Klaus Mueller Thesis: Methodologies to Enable General Participation in Data Visualization (GPA: 3.92 / 4.0)
	Goa University (Padre Conceição College of Engineering) , Goa, India Aug. 2007 – May 2011 B.E. Information Technology (Graduated with First Class with Distinction)
TECHNICAL SKILLS	Programming React, TypeScript, JavaScript, HTML/CSS, D3.js, Python, R, C/C++ Tools & Methodologies: Figma, REST API, Jest, Git, Agile/Scrum, Cloud – AWS, Lambda, Google Cloud Knowledge: Data Visualization, Human-Computer Interaction, UI/UX, Statistics

AWARDS

Best Paper Award at VAHC 2022	Nov. 2022
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

PUBLICATIONS

- A. Krishna, E. Papenhausen, D. Coelho, K. Mueller, "Synthesis of Realistic Medical Images with Pathologies Using Diffusion Models with Application to Lung CT and Mammography.," *SPIE Medical Imaging*, 2025.
- D. Coelho, B. Ghai, A. Krishna, M. Velez-Rojas, S. Greenspan, S. Mankovski, K. Mueller, "TaskFinder: A Semantics-Based Methodology for Visualization Task Recommendation.," *Analytics*, 3(3), pp.255-275, 2024.
- D. Coelho, H. Barot, N. Rathod, K. Mueller, "Can LLMs Generate Visualizations with Dataless Prompts?," *arXiv preprint arXiv:2406.17805*, 2024.
- D. Coelho, N. Gupta, E. Papenhausen, K. Mueller, "Patterns of Social Vulnerability: An Interactive Dashboard to Explore Risks to Public Health on the US County Level," *VAHC: Workshop on Visual Analytics in Healthcare at AMIA*, 2022. [*Best Paper Award at the VAHC 2022*]
- I. Chase, D. Coelho, W. Lee, K. Mueller, J. Curely, "Networks Never Rest: An Investigation of Network Evolution in Three Species of Animals," *Social Networks*, 2022
- J. Lee, D. Coelho, K. Mueller, "Scagnostics Glyphs: A Framework for Illustrating High-Dimensional Data Patterns in 2D Data Layouts," *Information*, 2022
- 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, 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
- 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, 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 2019 Visual Data Science Symposium (VDS)*]
- N. Hoque, D. Coelho, K. Mueller, "Examining the Visualization Practices of Data Scientists on Kaggle," *IEEE VIS*, 2019
- T. Im, D. Coelho, K. Mueller, P. De, "Smartphone Based Approximate Localization Using User Highlighted Texts from Images," *Pervasive and Mobile Computing*, 2018
- K. Jayachandran, S. Chilakamarri, D. Coelho, K. Mueller, "A Virtual Reality Grocery Shopping Game to Improve Awareness for Healthy Foods in Young Adults," *CEWIT: Emerging Technology for a Smarter World*, 2017
- D. Zhang, D. Coelho, K. Mueller, "Google Glass for Personalized Augmentations of Data Visualizations," *IEEE VIS*, 2016
- D. Coelho, K. Mueller, "A Study of Sparse Detector Designs with Interpolation for Multi-Slice Spiral CT," *IEEE Medical Imaging Conference*, 2015
- D. Coelho, K. Mueller, "Data Memes for Personal Visualization," *Workshop on Personal Visualization:*

Exploring Data in Everyday Life, 2015

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. Ha, S. Cheng, S. Mahmood, J. Kim, K. Mueller, "MemViz: A Tool for Creating Memorable Visualizations," *IEEE VIS*, 2014

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

PROFESSIONAL SERVICE	Journal/External Reviewer	
	IEEE TVCG	2019-Present
	IEEE VIS	2019-Present
	EuroVis	2020-Present
	ACM TiiS	2021-Present

PROFESSIONAL WEB PROFILES	researchgate.net/profile/Darius-Coelho
	scholar.google.com/citations?user=NsAMDAAAAAJ&hl=en
	linkedin.com/in/darius-coelho-241534aa/