

Education

Indiana University Bloomington

Ph.D. Student in Cognitive Science & Neuroscience

Bloomington, IN

Aug. 2021 - Present

University of North Carolina at Chapel Hill

Non-degree seeking

Chapel Hill, NC

Aug. 2019 – Dec 2019

Xavier University of Louisiana

B.S. in Psychology

New Orleans, LA

Aug. 2013 - May 2017

Louisiana State University

Worked towards a B.S. in Psychology

Baton Rouge, LA

Aug. 2012 - May 2013

Publications

Laborde, Z., Toler, W., Velhal, K., Farag, T., & Chakra, A. (2019). Method and System for Implementing a Holistic Umbrella Drone. *IP.com*. Retrieved from <https://priorart.ip.com/IPCOM/000257353>

Laborde, Z., & Cohen, J. (2016). Nostalgia and the Perception of Time. *XULAnEXUS*, 14(1), Retrieved from <https://digitalcommons.xula.edu/xulanexus/vol14/iss1>

Conference Presentations

Laborde, Z. & Izquierdo, E. (2022, November). *Spatial Embedding of Edges in Synaptic Generative Model of C. elegans*. Poster presented at Neuroscience 2022, San Diego, CA.

Laborde, Z. & Izquierdo, E. (2022, October). *Spatial Embedding of Edges in Synaptic Generative Model of C. elegans*. Poster presented at the 2022 Graduate Research Symposium & Reception, Bloomington, IN.

Laborde, Z., Stephenson, D., Reiss, A., Beaton, E., & Cohen, J. (2017, March). *Anterior-Posterior Insular Cortex Bisection Plugin for Mango*. Poster presented at the 24th annual meeting of the Cognitive Neuroscience Society, San Francisco, CA.

Laborde, Z., Heatherton, T., & Lopez, R. (2016, August). *You've Got a Friend in Me: Effects of People-based Cues on Amygdala, Orbitofrontal Cortex, and Dorsomedial Prefrontal Cortex*. Poster presented at the 2016 ASURE Poster Night, Hanover, NH.

Laborde, Z., Heatherton, T., & Lopez, R. (2016, July). *Learning to Lose Focus: Relationships Between Reward-Learning, Multitasking, and Distractibility*. Powerpoint presented at the 2016 Leadership Alliance National Symposium, Stamford, CT.

Laborde, Z. & Cohen, J. (2014, November). *Nostalgia and Time Dilation*. Powerpoint presented at the 12th Annual Charles A. Gramlich Psychology Research Symposium, New Orleans, LA.

Research Experience

Indiana University Bloomington

Research Assistant

Bloomington, IN

Aug. 2021 - Present

Professor Eduardo Izquierdo

- Invented algorithm for more efficiently approximating levelset on a high-dimensional manifold
- Simulated the development of a *C. elegans* connectome with a generative model, leading to improved accuracy compared with existing models
- Created an interactive, online application for the dynamical analysis of multi-compartment cellular differentiation using multiple control mechanisms (see <https://nanohub.org/resources/dynsysregen>)

Xavier University of Louisiana*Research Assistant*

Professor Jeremy D. Cohen

- Designed, administered, and published a 20 person research study on nostalgia and the perception of time
- Developed several pieces of software, including one automating a 2-4 hour manual process

New Orleans, LA

Aug. 2014 - Jul. 2017**University of New Orleans***Research Assistant*

Professor Elliot Beaton & Professor Jeremy D. Cohen

- Taught three members how to accurately trace the Insula using the Multi-image Analysis GUI (Mango) MRI program
- Created several shell scripts for transforming tensor neuroimaging data using Advanced Normalization Tools (ANTs)

New Orleans, LA

Aug. 2015 - Dec. 2016**Dartmouth College***Summer Undergraduate Laboratory Internship - Research Assistant*

Professor Todd F. Heatherton

- Compiled and analyzed gigabytes of 4-dimensional fMRI data using R, SPM, and FSL for correlations between the vmPFC, the reward network, and attention scores from tests developed in MATLAB

Hanover, NH

Summer 2016**Work Experience****IBM***Full Stack Developer*

Netcool Operations Insight - Artificial Intelligence Operations

- Developed features to automate event analytics analysis and prediction for operation engineers using machine learning

Research Triangle Park, NC

Apr. 2020 - Present*Full Stack Developer*

IBM Cloud Event Management

- Developed two internationally-used mobile apps for both Android and iOS

Nov. 2018 - Apr. 2020*Front End Developer*

IBM Cloud App Management

- Created front-end visualizations of topological data and analytics

Apr. 2018 - Nov. 2018*Site Reliability Engineer*

IBM Hybrid Cloud

- Responded to high severity alerts related to several IBM cloud applications
- Automated entire team, saving IBM approximately \$1,000,000/year

Jul. 2017 - Apr. 2018**Xavier University of Louisiana***Supplemental Instruction Leader*

Psychology Research Methods Spring 2016, Fall 2016

- Co-founded program with Professor Kate Eskine
- Arranged interactive sessions to help students learn research methods

New Orleans, LA

Jan. 2016 - Dec. 2016**Tastee Donuts***Assistant Manager**Cashier / Cook / Fryer*

Metairie, LA

Jun. 2015 - Feb. 2016**Jun. 2010 - Aug. 2012, Jun. 2013 - Jun. 2015****Louisiana State University***Archivist*

Baton Rouge, LA

Aug. 2012 - Dec. 2012**Skills & Training**

Coursework: Computational Modeling of Evolutionary and Adaptive Systems, Neural Engineering, Computational Bioengineering, Theories of Learning and Memory, Machine Learning, Computer Architecture, Network Science, Dynamical Systems Theory, Linear Algebra, Discrete Mathematics

Languages: Python, Mathematica, R, C++, Java, JavaScript (Node, React, Angular), Matlab, Groovy, Ruby

Applications: Jupyter Notebooks, Advanced Normalization Tools, SPM, FSL, ITK-SNAP, Multi-Image Analysis GUI (Mango)

Software: PyTorch, OpenAI Lab, NetworkX, NumPy, SciPy, Matplotlib, TensorFlow, Bash, Linux, BIOS, Git, LaTeX, Kubernetes, Docker, Watson SDK, Jenkins, Hadoop, Spark

Team Management: Agile, Scrum, Design Thinking

Leadership Positions

IBM <i>Agile Workspace Super Champion</i>	Research Triangle Park, NC Dec 2018 - Present
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IBM New Hire Network <i>Treasurer</i>	Research Triangle Park, NC Aug. 2017 - Aug. 2018
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Speech & Debate Team - Xavier University of Louisiana <i>President</i> 2017 <i>Vice President</i> 2016 <i>Treasurer</i>	New Orleans, LA May 2016 - May May 2015 - May Aug. 2014 - May 2015
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Speech & Debate Team - Louisiana State University <i>Treasurer</i>	Baton Rouge, LA Aug. 2012 - May 2013
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Honors & Awards

Rebec Fellow, Indiana University Bloomington, 2022
Security and Privacy by Design Foundations Badge, IBM, 2019
IBM Cloud Private - Continuous Integration/Continuous Delivery Badge, IBM, 2019
Jumpstart Scholar, IBM, 2019
Manager's Choice Award, IBM, Q1 2018, Q1 2019
People's Choice Award, IBM Developer SLAM, 2018
IBM Developer Jumpstart - Explorer Badge, IBM, 2018
IBM Developer Jumpstart - Practitioner Badge, IBM, 2018
Deep Learning Badge, IBM, 2018
Docker Essentials with Watson Conversation Badge, IBM, 2017
IBM Cloud Essentials Badge, IBM, 2017
Enterprise Design Thinking Practitioner Badge, IBM, 2017
Who's Who Among Students in American Universities and Colleges, 2017
1st Place, Xavier-Dillard Coding Competition, 2017
Dean's List, Xavier University of Louisiana, Fall 2015, Spring 2016, Spring 2017
National Semifinalist in Impromptu Speaking, Forensics Novice Nationals, 2013
National Semifinalist in Impromptu Sales, Forensics Novice Nationals, 2013
National Competitor in Extemporaneous Speaking, American Forensics Association's National Individual Event Tournament, 2013

Volunteer Experience

St. Augustine High School Debate Coach 70+ hours	New Orleans, LA Aug. 2015 - May 2017
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