Bryan Jose Medina

Curriculum Vitae

Education

2021-Present **Ph.D. Student, Brain and Cognitive Sciences**,
Massachusetts Institute of Technology, Cambridge, MA.

2016-2021 **B.S. Computer Science, Minor in Mathematics, Minor in Cognitive Sciences**,
University of Central Florida, Orlando, FL.

Technical Skills

Programming Python, Java, C++, C, R, Matlab, Javascript, LaTeX, Bash

Software Emacs, R Studio

Libraries and Frameworks TensorFlow, Keras, PyTorch, PyGame, Processing, Numpy, SciPy, Matplotlib, Plotly

Research Experience

2020-2021 **Visiting Student,** ***Department of Brain and Cognitive Sciences***,
Massachusetts Institute Of Technology

2020 **MSRP-BIOx Research Intern,** ***Center For Brains, Minds, and Machines***,
Massachusetts Institute Of Technology

Advisor: Dr. Josh McDermott

2019 **Undergraduate Program in Neural Computation Research Intern,** ***Center for the Neural Basis of Cognition***, Carnegie Mellon University

Advisor: Dr. Robert E. Kass

2018-2019 **Undergraduate Research Assistant,** ***Center for Research in Computer Vision***,
University of Central Florida

Advisor: Dr. Mubarak Shah

2017 **Undergraduate Research Assistant,** ***Hu-Lab***, University of Central Florida

Advisor: Dr. Haiyan Hu

Awards and Honors

2021 ***Dean of Science Fellow***, MIT

2021 ***National Science Foundation Graduate Research Fellow***

2021 ***Order of the Pegasus*** **Award** (Most Prestigious and Significant Award at UCF)

2020 ***Hispanic Heritage Scholarship Fund of Metro Orlando*** **Scholar**

2020 ***Hispanic Scholarship Fund*** **Scholar**

2020 **McNair Summer Research Institute Scholarship**

2020 **Massachusetts Institute of Technology Summer Research Fellow (NSF Funded)**

2019 **Ronald E. McNair Scholar**

2019 **Carnegie Mellon University Summer Research Fellow (NIH Funded)**

2017 **President's Honor Roll** (x4)

2017 **Dean's List** (x5)

2016 ***Bright Futures Academic*** **Scholar**

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bj_mdn

Abstracts, Conferences, and Presentations

UCF 2021 Student Symposium **Medina, B. J.**, Saddler, M. R., McDermott, J. H., (2021, April). *Pitch Representations Emerge in Artificial Neural Networks Optimized for Everyday Auditory Tasks.* Poster Presentation.

ARO 2021 **Medina, B. J.**, Saddler, M. R., McDermott, J. H., (2021, February). *Pitch Representations Emerge in Artificial Neural Networks Optimized for Everyday Auditory Tasks.* Abstract Accepted.

CECIIS-2020. **Medina, B. J.**, Saddler, M. R., McDermott, J. H., (2020, October). *Investigating artificial neural networks optimized for ecological auditory tasks as a normative model of pitch perception.* Abstract accepted. Oral presentation.

SACNAS. **Medina, B. J.**, Saddler, M. R., McDermott, J. H., (2020, October). *Investigating artificial neural networks optimized for ecological auditory tasks as a normative model of pitch perception.* Abstract accepted. Poster presentation.

Baylor University McNair Conference. **Medina, B. J.**, Saddler, M. R., McDermott, J. H., (2020, October). *Investigating artificial neural networks optimized for ecological auditory tasks as a normative model of pitch perception.* Abstract accepted. Poster presentation.

MSRPx BIO Presentation. **Medina, B. J.**, Saddler, M. R., McDermott, J. H., (2020, August). *Investigating artificial neural networks optimized for ecological auditory tasks as a normative model of pitch perception.* Oral presentation.

UCLA McNair Conference. **Medina, B. J.**, Saddler, M. R., McDermott, J. H., (2020, July). *Investigating artificial neural networks optimized for ecological auditory tasks as a normative model of pitch perception.* Abstract accepted. Poster presentation.

Vision Sciences Society Annual Meeting. Hernandez, C. I., Rahill, K., Pham, M., Manriquez, L., Louis, P., Figueroa, A., **Medina, B. J.**, Wolfe, B., Sawyer, B. D., (2020, May). *Prevalence effects are not driving hazard detection on the road.* Abstract accepted. St. Pete Beach, FL. Did not attend due to COVID-19 (Coronavirus) pandemic.

Showcase of Undergraduate Research Excellence. Hernandez, C. I., Rahill, K., Pham, M., Manriquez, L., Louis, P., Figueroa, A., **Medina, B. J.**, Wolfe, B., Sawyer, B. D., (2020, April). *Prevalence effects are not driving hazard detection on the road.* Abstract accepted to Conference at the University of Central Florida, canceled due to COVID-19 (Coronavirus) pandemic

Center for the Neural Basis of Cognition's Summer Undergraduate Poster Session. **Medina, B. J.**, Olanrire, T., Siegle, J., Kass, R. E., (2019, August). *Response Latencies Across Six Visual Areas in the Mouse.* Presented research conducted with Dr. Robert E. Kass and Tolani Olanrire, Ph.D. student in Machine Learning, at Carnegie Mellon University

Leadership, Membership and Outreach

2020-2021 **Graduate Prep Advisor, *Academic Advancement Programs***, University of Central Florida

Supervisor: Colleen Smith

2020 **Attendee, *Virtual Brains, Minds, and Machines Summer Course***, Center for Brains, Minds, and Machines

2020-2021 **Vice-President, *SACNAS***, University of Central Florida

Advisor: Michael Aldarondo-Jeffries

2020-2021 **Co-Founder**, **Vice-President, *Cognitive Sciences Club***, University of Central Florida

Advisor: Dr. Luis Favela

2020 **Journal Club Attendee, *UCF NLP Group***, University of Central Florida

Advisor: Dr. Fei Liu

2020 **Attendee, *Quantitative Methods Workshop***, Massachusetts Institute Of Technology

Advisor: Dr. Mandana Sassanfar

2020 ***GIS Day* Volunteer**, University of Central Florida

2019, 2020 **Volunteer, *SECME Regional Competition***, University of Central Florida

2019, 2020 **Judge, *SECME Codecraft Computer Programming Competition***, University of Central Florida

2018-2019 **STEM Ambassador *Initiatives in STEM***, University of Central Florida
Advisor: Rene Johnston

2016 **Teacher, *Hour of Code***, University of Central Florida

Teaching

2021 **Teaching Assistant, *Quantitative Methods Workshop***, Massachusetts Institute Of Technology

2020 **Tutorial, *UCF NLP***, University of Central Florida

2019 **Python Lecturer, *LabX***, University of Central Florida

2019-2020 **Undergraduate *EXCEL* Tutor**, University of Central Florida

2017 **Teaching Assistant and Lecturer, *Summer Institute @ UCF***, University of Central Florida

Invited Podcasts, Talks, and Workshops

2020 **Graduate School Preparation Podcast, *Elements of an Application for Funding***, University of Central Florida

2020 **Undergraduate Research and Transfer Process Panel**, Valencia College

2019 **STEM Seminar Student Panel**, University of Central Florida

2018 **Mathematics Workshop**, Hialeah Gardens High School

2018 **Lecture on Computer Science and Engineering**, Orange County Preparatory Academy

Certification

2020 ***CITI Program*, Social / Behavioral Research Investigators and Key Personnel**

Relevant Coursework

Computer Science + Statistics Courses	Theory of Computation, Data Structures, Object Oriented Programming, Algorithms, Robot Vision, Machine Learning*, Advanced Artificial Intelligence*, Senior Design, Statistical Theory I, Statistical Foundations for Data Science and Artificial Intelligence, Computer Understanding of Natural Language*
Mathematics Courses	Calculus I-III, Ordinary Differential Equations, Linear Algebra, Probability, Random Processes and Applications, Introduction to Topology
Other Courses	Chemistry I, Chemistry II, General Psychology, Biological Principles, Numerical Computing, Language and Culture, Philosophy of Mind, Sensation and Perception, Minds and Machines: Philosophy of Cognitive Science

* - *Graduate Coursework (completed during undergrad)*

** - *In Progress*

*** - *To be completed*

Languages

English	Fluent
Spanish	Fluent
Portuguese	Basic