Sebastian Rodriguez, PhD

Software Engineering / Research

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EDUCATION

University of Illinois at Urbana-Champaign
PhD Computer Science | 2016 – 2022
GPA: 3.97 / 4.00

Northwestern University
BS Computer Engineering | 2012 – 2016

SKILLS

Programming
Python, pandas, R
C#, Unity3D, Oculus XR
JavaScript, Node.js, React.js
C++, Java, PHP
SQL, Hive, Presto
git, CI/CD
AWS, BASH/Unix

Research
Inferential/summary statistics
Factor analysis/pathway modeling
User modeling
Machine learning/engineering
Experiment design (traditional/AB)
Scientific writing

Languages
English - native
Spanish - native

PROJECTS

Aurora
github.com/antonpup/Aurora
C# OSS, synchronizes RGB lighting across devices

Chromatone
https://youtu.be/-SmzZ0YtzQc
VR app to visualize and manipulate music stems

Mizuna
github.com/srodriguez1850/Mizuna
OSS Python library to sync .ipynb files with Overleaf

TIDALsign
https://youtu.be/j-NQ40gS5eM
Arduino flex-sensory haptic glove to teach ASL

EXPERIENCE

Meta – Research Data Scientist
Urbana, Illinois (Remote) | Aug 2022 – Present

Meta - Quantitative UX Researcher Intern
Menlo Park, California (Remote) | Jun 2021 – Aug 2021

- Identified key user-level dimensions for new Messenger features through survey responses and log data analysis across user strata
- Wrote internal pipelines to data wrangle, conduct summary analyses, build user models, and produce visualizations from survey responses and internal databases **(Python, SQL)**
- Collaboratively designed and implemented an award-winning project for an internal hackathon **(Unity, C#)**

U.S. Army Research Laboratory - Research Fellow
Aberdeen, Maryland | Aug 2018 – Dec 2020

- Designed an interactive simulation **(Unity, C#)** for AI pursuit tasks (e.g., predator-prey) to operationalize and validate autonomous UAV behavior and performance
- Implemented IPC between the environment and local machine learning instances to drive AI behavior through deep reinforcement learning for training and testing **(Python)**
- Built analytics pipelines and structural equation models on 200+ participants to determine patterns of trust and team performance with deep learning agents **(Python, R)**

U.S. Army Research Laboratory – Research Engineer Intern
Playa Vista, California | May 2018 – Aug 2018

- Designed an interactive experience to investigate how anthropomorphism and reliability affects adherence in humans interacting with recommender systems **(Unity, C#)**
- Built analytics pipelines and structural equation models on 1000+ participants to study domain knowledge in non-experts interacting with recommender systems **(Python, R)**

Univ. of Ill. at Urbana-Champaign - Research Assistant
Urbana, Illinois | Aug 2016 – May 2018

- Designed and maintained an API for devices requesting control of multiple locally synchronized UAVs **(Python)**
- Developed a sample Android application to demonstrate API use, and presented the proof of concept to 70+ researchers and associates **(Java)**

Washington State University - Research Intern
Pullman, Washington | Jun 2015 – Jul 2015

- Built a WPF app to process and detect noise in real-time data streams from an array of phasor measurement units **(C#, C++)**

Portfolio and research publications found at **sebas.me**