

Sebastian S. Rodriguez

Software Engineering / Research

Human-Computer Interaction @ UIUC

✉ srodri44@illinois.edu
🌐 sebas.me
🌐 linkedin.com/in/srodriguez1850
☎ +1-312-391-6952

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



with Microsoft Research - Collaborator (@ UIUC)

Urbana, Illinois | Jun 2021 – Present

- Contributing to an open-source toolkit that facilitates remote user studies for XR research (networking, XR object tracking, event-driven logging) (**Unity**)



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