Sebastian Rodriguez, PhD

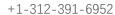
Software Engineering / Research



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EDUCATION

University of Illinois at Urbana-Champaign

PhD Computer Science | 2016 - 2022

Northwestern University

BS Computer Engineering | 2012 - 2016

SKILLS

Programming

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

Research

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

Languages

English – native Spanish – native

PROJECTS

RemoteLab

github.com/microsoft/Remote-Lab

Unity OSS library to support remote XR user studies

Chromatone

youtu.be/-SmzZ0YtzQc

VR app to visualize and manipulate music stems

TIDALsign

youtu.be/j-NQ40gS5eM

Arduino flex-sensory haptic glove to teach ASL

Aurora

github.com/antonpup/Aurora

C# OSS, synchronizes RGB lighting across devices

EXPERIENCE



Meta – Analytics Engineer

Remote | Aug 2022 - Present

- Collaborated with cross-functional stakeholders to develop product roadmaps in Meta's privacy infrastructure, driving procedural innovations and optimizations
- Developed scalable pipelines and automated workflows to analyze petabytes of data for inference and modeling, introducing novel metrics for internal infrastructure supporting privacy (Python, SQL, CI/CD)
- Built internal management tools to support GDPR compliance and facilitate responsible data handling practices, eliminating a total of 15 years of non-compliant internal assets (Python, PHP)

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Meta - Quantitative UX Researcher Intern

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 XR 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 Al 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 Al 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 III. 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)

Portfolio and research publications found at sebas.me