

Alejandro de la Vega

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SUMMARY

I am a research data scientist building tools using modern software development practices and machine learning to accelerate the discovery of reliable insights from human neuroimaging data.

EXPERIENCE

Principal Investigator & Research Scientist, University of Texas at Austin June 2021 – Present

- Lead a team of scientists and engineers to develop a cloud-based platform for meta-analysis of functional neuroimaging data, aggregating over 14,000 individual studies
- Collaborate with other major universities (Stanford, Oxford, McGill, MIT) to coordinate application design and statistical methods
- Manage two federal research grants totaling over \$4M in funding

Research Scientist, University of Texas at Austin March 2019 – June 2021

- Created an online platform for end-to-end neuroimaging analysis, integrating complex workflows to enable rapid and reliable analysis in over 30 fMRI datasets
- Developed backend and RESTful API in Python for the platform, facilitating dataset access
- Collaborated with frontend engineers to design an easy-to-use analysis builder using React
- Designed containerized statistical workflows in Docker, and deployed them to various computational environments, including Texas Advanced Computing Center supercomputers

Postdoctoral Fellow, University of Texas at Austin May 2016 – March 2019

- Implemented core tools and standards to solve common bottlenecks in neuroimaging analysis, such as querying datasets, and standardized representation of statistical models
- Contributed to a Python library for automated feature extraction using state-of-the-machine learning algorithms and content analysis services, such as Google Vision API

Research and Teaching Assistant, University of Colorado Boulder August 2009 – May 2016

- Developed tools to parcellate the human brain into distinct regions using unsupervised learning
 - Created web application for online assessment in a large-scale genome-wide association study using Facebook, reaching over 5,000 participants
 - Taught nine workshops on data science for psychology using R for graduate students and faculty
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EDUCATION

University of Colorado Boulder, Boulder, CO 2009-2016

Ph.D., Cognitive Neuroscience

Dissertation: "Large scale meta-analytic cartography of human frontal cortex"

Pomona College, Claremont, CA 2005-2009

B.A, Linguistics and Cognitive Science (Computer Science track)

SKILLS

- Python, Flask, PostgreSQL, Restful APIs, SciPy/NumPy, Docker, Machine Learning, Git, CI/CD