

Stephanie Rosales Diaz

Fort Wayne, IN · Open to relocate (US research hubs) · (260) 267-5541 · connect@stephanierd.dev
github.com/st3phable · stephanierd.dev

RESEARCH INTERESTS

Computational neuroscience & computational psychiatry: generative / predictive-coding models of belief and psychosis-like inference; neural dynamics; transcriptomic approaches to schizophrenia pathophysiology. Aim: scientific understanding of mind and brain via modeling, analysis, and research software.

SUMMARY

Aspiring computational neuroscientist / research engineer with dual training in computer science and psychology, plus production software experience (Microsoft). Independent projects in schizophrenia transcriptomics and hierarchical generative models of pathological inference. Seeking research assistant, research software engineer, or junior research roles in computational neuroscience, computational psychiatry, or cognitive modeling labs.

RESEARCH PROJECTS

Schizophrenia transcriptomics — differential expression & gene networks (in progress) | Python, RNA-seq

- Framing: diagnostic categories lack mechanistic validity; study dysregulated expression and networks in schizophrenia using public post-mortem brain transcriptomics (e.g. GEO / consortia-class bulk RNA-seq; PsychENCODE context).
- Pipeline direction: acquisition → QC/normalization → differential expression → pathway / regulatory interpretation; public write-up + GitHub deliverables; portfolio module on stephanierd.dev.

Hierarchical generative model of psychotic-like inference (active) | Python, Bayesian / predictive coding

- Research question: under what precision regimes does a hierarchical Bayesian agent form stable false beliefs despite sensory evidence?
- MVP: 2-level generative agent; mis-set sensory vs prior precision → pathological belief trajectories; simulation + clean write-up (computational psychiatry framing).

Neural activation & dynamical systems visualization (in progress) | Python, PyTorch

- Simulates neural activation and chaotic attractor dynamics for cognitive-modeling exploration; public notes + inspectable demos.

Research portfolio & open lab notebook | Next.js, TypeScript | stephanierd.dev

- Interactive research modules, permanent notes, and project specs as research infrastructure.

RESEARCH-ADJACENT ENGINEERING

Microsoft | Software Engineer Intern | Azure AD Identity Governance | Remote | Jul 2021 – Aug 2021

- Integrated third-party workflow into production identity platform; large codebases, abstraction, reliability.
- Transfer to science: reproducible pipelines, careful interfaces, collaboration in complex systems (research software & analysis tools).

Microsoft | EXPLORE Intern | Azure AD Identity Governance | Remote | Jul 2020 – Aug 2020

- Team software project in enterprise identity; industry engineering practices applied later to scientific tooling.

Best Buy | Computing Sales Specialist → Sales Shift Lead | Fort Wayne, IN | Aug 2024 – Mar 2025

(Earlier: Home Theater / Sony rep, Oct 2023 – Jul 2024)

- Technical communication under pressure; leadership and coaching (employment continuity).

EDUCATION

Purdue University Fort Wayne | Fort Wayne, IN | CS & Psychology coursework (Honors) | 2024–2026

Relevant: Discrete Mathematics, CS II (Java), C & Unix, Psychobiology

Pomona College | Claremont, CA | Computer Science coursework | Apr 2019 – Mar 2022

Relevant: Cognitive Science, Linguistics, Functional Programming (Coq)

LEDA Scholar, Cohort 14 | Princeton University | 2017–present

Selective national program for high-achieving first-generation / low-income students.

SKILLS

Scientific computing: Python, NumPy / scientific stack, PyTorch, data analysis workflows, Git for research

Domains: computational psychiatry, predictive coding / generative models, schizophrenia literature, transcriptomics project design

Also: TypeScript, Next.js, Unix, Bayesian inference (applied), dynamical systems, reproducible research documentation