Samuel Thorpe

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Google Scholar
Github

Experienced Data Science & ML Leader in BioMed/Health tech.
PhD Neuroscientist turned Engineering Manager.

PROFESSIONAL SUMMARY

Over a decade translating scientific insight into real-world health applications. Architect of production-scale platforms for digital biomarker analytics and physiological time series modeling. Proven ability to build ML/DS systems, lead cross-functional teams, and bridge research and deployment.

EXPERIENCE

Koneksa Health, Inc. ◦ NYC, NY, USA (REMOTE)
Data Engineering Manager ◦ JAN 2023 - CURRENT
Senior Data Scientist ◦ MAR 2021 - JAN 2023

- Led design of AWS-based microservice infrastructure for FDA-regulated clinical trials.
- Built scalable ETL pipelines integrating biosensor and PRO data across 30+ studies.
- Spearheaded CI/CD adoption, infrastructure-as-code & production monitoring tools.
- Mentored and supervised a hybrid team of engineers and scientists.
- Oversaw development of regulatory documentation and Standard Operating Procedures (SOP) for algorithm development, statistical analysis, and data management in service of digital biomarker qualification.

Cala Health, Inc. ◦ BURLINGAME, CA, USA (REMOTE)
Data Science Consultant ◦ JULY 2020 - NOV 2020

- Built novel accelerometer artifact detection/removal algorithms to enhance quantification of essential tremor.

NovaSignal, Corp. ◦ LOS ANGELES, CA, USA
Principal Data Scientist ◦ JAN 2021 - MAR 2021
Senior Data Scientist ◦ JAN 2018 - JAN 2021
Data Scientist ◦ MAR 2016 - JAN 2018

- Led ML modeling for ischemic stroke and cerebrovascular event prediction using Transcranial Doppler (TCD).
- Partnered with clinical teams to integrate models in real-time diagnostic platforms.
- Designed signal-processing tools for modeling emboli detection and blood flow dynamics.

Univ. Maryland Child Development Lab ◦ COLLEGE PARK, MD, USA
Postdoctoral Research ◦ SEP 2012 - JAN 2016

- Characterized development of human EEG mu/alpha networks from infancy through adulthood using cortical source localization with anatomical head models derived from subject-specific MRI.

UC Irvine Human Neuroscience Laboratory ◦ IRVINE, CA, USA
Graduate Research ◦ SEP 2006 - JUNE 2012

- Built computational models and conducted experiments to quantify human spatial attention and sensory processing using simultaneous EEG/MEG.

EDUCATION

Ph.D. Mathematical Behavioral Science, 2012
University of California, Irvine ◦ IRVINE, CA, USA

Dissertation: "Dynamic modulation of sensory cortex by top-down spatial attention"
Relevant coursework: EEG brain computer interfaces, computational neuroscience, measure theory, stochastic processes, computational PDE, multivariate time series.

B.S. Mathematics, & B.A Psychology, 2005 ◦ IRVINE, CA, USA
University of California, Irvine

Areas of Concentration: Cortical neuroscience, cognitive modeling.
Honors Thesis: "Visual cortex: an investigation of delay effects on coupled nonlinear oscillators"

SKILLS & INTERESTS

Programming & Platforms
Mastery of Python (expert) and Matlab (>10 yrs) for knowledge discovery and visualization, together with Git, Docker, and Linux/Bash tools for dev and deployment.

Data Infrastructure
AWS — S3, EC2, Lambda, Athena, CI/CD, data lakes & observability — CloudWatch, New Relic

Extensive Applied ML
Classification, cross-validation, GLMs, clustering, bootstrapping; Scikit-learn, TensorFlow, PyTorch

Excellent Signal Processing
Fourier analysis, wavelets, SVD, ICA, EMD, digital filtering

Engaging Communicator
Strong communicator across teams and audiences; experienced in grant writing, technical documentation, and scientific publishing

Dynamic Systems Experience
Numerical ODE, nonlinear systems, manifold learning, graph theory

AWARDS & CERTS

Data Incubator Scholar (2015)
Selected in top 5% of 1,000+ applicants based on technical challenges and interviews

Coursera DeepLearning.AI Deep Learning Specialization (in progress, 2025)