Shashaank Vattikuti   Reston, VA   svattikuti@cittatech.org

10+ years with NIH data analysis group (brain data, genomics, diabetes, metabolism), 2+ years with UCSF oncology group (novel assays)

Projects w/ different durations (months, year) resulting in products (code, papers, talks)

Data visualization-exploration tools: interactive - Gannt organization tool for disparate data, Outlier discovery tool for IMF World Economic Outlook; Chloropleths for COVID-19

Ability to find and communicate insights:

- 11+ peer-reviewed analysis and modeling papers (h-index=11, 5000+ citations)
- Talks: genomics (NIH, Howard Univ), cognition (IPAM, NIMH, SIAM Life Sciences), other (modern portfolio theory, causal inference)

Skills/Experience

Health Data Sets
Genomics (dbSNP, UK Biobank), Health claims (Medicare, Military Health System), Population health (COVID-19 data pulls), Molecular assays (UCSF-Oncology, NIH, DNA/RNA/protein assays), Brain data (fMRI,EEG,MEG)

Languages/Platforms
Python, **R**, **SQLite**, **Dashboards** (Plotly/Dash), Stan, Access, Git, iOS app development, Julia, DL platforms (TFP,PyTorch), MATLAB, javascript, Jupyter/Colab, LaTeX

Methods and systems
Disparate **data engineering/infrastructure** (relational db, ETL), Data Exploration, Machine Learning (regression models, classifiers, state-space models, deep learning), Epidemiology, Statistical and Biophysical modeling, Simulation testing, AWS, HPC (NIH-BioWulf, DoD)

Project Management
Co-captain AI team - team mederrata, Centers for Medicare & Medicaid Services AI Challenge, 2019 - 2020

Project supervision-**mentor** (machine learning, simulations): 6+ mentees, progressed to Columbia/Vanderbilt MD/PhD, UCI-Math Bio, Broad Inst, and Software Engineering Institute

Education

M.D.
University of Vermont College of Medicine
2010

Recent Positions

Center for Military Psychiatry and Neuroscience (WRAIR-US Army)
Principal Investigator (contractor)
Epidemiology, signal processing, predictive modeling
2020-present

Laboratory of Biological Modeling (NIH)
Postdoctoral fellow and Scientist
2010-2020

Relevant Projects

Organize data across many sleep-performance studies
WRAIR and NIH
Integrate data across many years of studies for predictive modeling; multiple time-scale time series, latent variable analyses
2020 - present

Bayesian COVID-19 pandemic modeling
NIH
PyStan model, data pull/processing, and global visualizations (NIH medRxiv paper, 13 citations)
May, 2020

Medical claims analysis - SQL/Python, statistical models
CMS (Medicare) AI Challenge - team Mederrata, Military Health System sleep-pathology epidemiology
October, 2019 - present

Genome analysis tools
NIH
4 peer-reviewed analysis and methods paper, published contributor to Plink2 genomic analysis suite, early-stage consultant for Genomic Prediction startup (prenatal genetic screening)
2012-2017