Charles Horn, PhD

Pittsburgh, PA 15234 | (412) 908-0310 | charleschorn@gmail.com | linkedin.com/in/charleschorn

EXPERIENCE

Principal Investigator, Life sciences　　　　　　　　　　　　　　　　　2009 to present
UPMC Hillman Cancer Center & University of Pittsburgh　　　　　　　　　Pittsburgh, PA

- Designed & led 4 cross-functional teams of engineers, computer scientists, statisticians, biomedical scientists, & clinicians for statistical & machine learning analysis of time series & patient data
- Acquired & allocated > $8M USD for government & industry funded research projects for staffing, computer resources, materials, & equipment
- Served on government & in-house advisory committees for regulatory issues & research project reviews of impact, design, & statistical methods
- Authored > 25 scientific publications & presented > 30 oral presentations (in-house, national, & international audiences); designed & hosted 2 international biomedical conferences
- Developed, through promotion & marketing, & tracked user base of > 1,800 biomedical & data science professionals for government funded http://SPARC.science web portal, a public facing biomedical data repository & modeling/simulation platform

Principal Investigator, Life sciences　　　　　　　　　　　　　　　　　2000 to 2009
Monell Chemical Senses Center　　　　　　　　　　　　　　　　　　　Philadelphia, PA

- Led in-house research team in data acquisition & analytics for government & corporate funded research projects
- Produced 18 publications by collecting & analyzing biological, time series data (signal processing, frequency and time domain signals)

EDUCATION

MBA, Drexel University, Philadelphia, PA
Postdoctoral fellow, Center for Neurobiology & Behavior, Columbia University, New York, NY
PhD, Neuroscience, Kansas State University, Manhattan, KS

SKILLS

Programming languages, IDE tools, scripting, & version control:
- Python, R, vim, bash, Jupyter notebook, papermill notebook automation at scale, git, Github

Computer systems & containerization:
- Linux/Windows/MacOS, Unix command line, multi-core/thread processing, remote login (SSH & VNC connections), construction of docker images

Databases & cloud computing:
- PostgreSQL, MongoDB, SQL queries, RDBMS, AWS (RDS, QuickSight), Azure

Data cleaning, processing, & visualizations:
- pandas, numpy, scipy, statsmodels, matplotlib, seaborn, bokeh, plotly, ggplot, bitmap & vector graphics

Modeling & statistics:
- machine learning (random forest, SVM, gradient boosting, outlier detection), forecasting, scikit-learn, Darts, deep learning, parametric & non-parametric hypothesis testing, regression analysis

Communications:
- oral presentations, written/technical reports, MS Excel & Powerpoint, MS Teams, Zoom, Slack