Christopher Burch

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# Senior Data Scientist | Turning Complex Data into Actionable Insight

Over 10 years of experience leading advanced analytics projects across public health, logistics, financial analysis, and defense. Skilled in machine learning, complex systems modeling, and R/Python development. Known for delivering actionable insights and building tools used across large-scale federal initiatives.

# Professional Experience

**MITRE Corporation** — Lead Data Scientist  
Sep 2022 – Jul 2025

- Led development of ML/AI models for public health, federal workforce equity, and operations analysis across multiple domains.  
- Co-PI for a VA-focused research initiative improving disability claims processing using predictive analytics and human-centered modeling.  
- Core epidemiology modeling expert on the DARPA ASKEM program; evaluated automated modeling systems and contributed to strategic modeling approaches.  
- Built reusable R packages for visualization and data workflows; tools adopted across internal teams.  
- Developed agent-based models and system dynamics simulations for issues like whale strike reduction and hoof-and-mouth disease response.  
- Mentored junior scientists in modeling, simulation, and statistical best practices.

**Grant Leading Technology** — Senior Data Scientist & Consultant  
Aug 2018 – Sep 2022

- Led ML projects for FAA fleet data, improving policy around training and accident risk.  
- Developed FAA-wide recall tracking system, reducing recall backlog by 90%.  
- Created open-source R packages to streamline federal API data workflows.  
- Proposed business process improvements through systems modeling.

**Cogentis Therapeutics** — Cofounder / Chief Data Officer  
Jan 2015 – Jul 2018

- Built statistical power models and financial forecasts to guide biotech R&D.  
- Defined data standards, documentation, and visualization protocols.

# Technical Skills

Languages: R, Python, Julia, SQL, M, VBA  
Tools: Git, Shiny, Spark, Tableau, Excel, Linux, Agile/Scrum  
Core Expertise: ML/AI, Simulation, Epidemiology, Statistical Analysis, Systems Modeling

# Education & Certifications

MBA, Johns Hopkins University — Enterprise Risk Mgmt. & Marketing  
BA, Organizational Management, Arizona State University  
MicroMasters, Massachusetts Institute of Technology – Data, Economics, and Development of Policy (DEDP)  
Certs: IBM ML Specialization · JHU Data Science · Lean Six Sigma YB