Contact

sbs@stevenbsmith.net

www.linkedin.com/in/stevenbradleysmith (LinkedIn)
www.stevenbsmith.net/ (Personal)

Top Skills

Retrieval-Augmented Generation (RAG)
Artificial Intelligence (AI)
LLM

Certifications

Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization
Hazardous Materials Awareness Level (472-1997)
Managing Social and Human Capital
Retrieval Augmented Generation (RAG)
Git

Publications

The cervicovaginal microbiota host interaction modulates Chlamydia trachomatis infection
The vaginal microbiota, host defense and reproductive physiology
Host Response to Respiratory Bacterial Pathogens as Identified by Integrated Analysis of Human Gene Expression Data
Identification of Common Biological Pathways and Drug Targets Across Multiple Respiratory Viruses Based on Human Host Gene Expression Analysis

Steven Smith, Ph.D.

Leader in Software Engineering, Bioinformatics, and Computational Biology
United States

Summary

Business-oriented technology leader with 10+ years of experience at the intersection of biotech, software engineering, and data science. Proven track record leading cross-functional teams, developing regulated medical software, and translating scientific innovation into strategic business outcomes. Experienced in stakeholder management, platform strategy, and talent development.

Experience

Labcorp
Senior Bioinformatics Scientist
May 2023 - Present (2 years 5 months)

Leads multidisciplinary team of engineers and scientists to deliver FDA cleared oncology diagnostics software in alignment with business and regulatory goals and including Voice of Customer.

Shortened software release timeline by 50% by implementing multiple process improvements after identifying bottlenecks. Evaluating Agentic AI for further process improvements.

Design, develop, test, and maintain LLM RAG supported sequencing-based oncology diagnostics software, databases and computational & bioinformatic pipelines.

Subject Matter Expert on Copy Number Variants and Rearrangements supporting development efforts within oncology diagnostics assays.

Output Biosciences
Computational Biology Lead
June 2022 - April 2023 (11 months)

Enabled product discovery by designing and implementing a bioinformatics workflow to evaluate mechanism of action and biomarker discovery in lead candidate compounds.

Compiled statistical analysis reports for high-level communication and decision-making for company founders.

Built bioinformatics and computational infrastructure to extract value from raw clinical sample data

Kaleido Biosciences
Principal Scientist, Computational Biology
August 2021 - April 2022 (9 months)
Lexington, Massachusetts, United States

Instrumental in the discovery of novel therapeutics that modulate the microbiome for the treatment of immunological diseases by using computational and statistical pipelines.

Lead the design and build of a platform-wide analytical toolbox enabling biologists and chemists to query, integrate, analyze, visualize, and export experimental data.

Computationally analyzed 16S rRNA, shallow shotgun and RNA sequencing data from mouse and ex vivo experiments across multiple project disease areas.

Teva Pharmaceuticals
Principal Computational Biology Data Scientist
July 2020 - August 2021 (1 year 2 months)
West Chester, Pennsylvania, United States

Coordinated and evaluated internal and external disease and target prioritization efforts using advanced analytical methods such as embeddings analysis and deep learning methods.

Created and executed computational biomarker discovery for various autoimmune therapy areas using genomic, transcriptiomic and proteomic data.

Carried out translational statistics analysis efforts and communicated findings to various stakeholders.

Personal Genome Diagnostics
3 years 1 month

Computational Biology Scientist
February 2020 - June 2020 (5 months)
Baltimore, Maryland, United States

Created and applied innovative computational and bioinformatic methods to achieve product performance in NGS liquid biopsy (plasma) assays

Bioinformatics Scientist
June 2017 - February 2020 (2 years 9 months)
Baltimore, Maryland

Helped deliver RUO and CE-marked blood-based NGS assays to global markets (PGDx elio plasma resolve).

Managed a cross functional team to develop Next-Gen Sequencing (NGS) bioinformatic analysis pipelines for identifying cancer-associated genetic variants.

Assessed performance and coordinated implementation of key plasma assay (liquid biopsy) analyte improvements including Single Nucleotide Variants (SNVs) and Copy Number Variants (CNVs).

University of Maryland Baltimore
PHD Candidate
August 2012 - May 2017 (4 years 10 months)
College Park, MD

My PhD project studied the host response associated with temporal vaginal microbial composition shifts.

I collected and analyzed biological samples in order to subsequently train statistical/computational models for predictive capabilities.

Studied candidate RNA transcripts in in vitro cell cultures and identified a key host response to protect against Chlamydia infection.

GlaxoSmithKline
Computational Biology Analyst
September 2010 - June 2012 (1 year 10 months)
Greater Philadelphia Area

Computationally discovered common genomic signatures of host responses after exposure to pathogens to illicit novel drug targets and insights into viral-disease similarities.

Publication details:
Smith SB, et al. (2012) Identification of Common Biological Pathways and Drug Targets Across Multiple Respiratory Viruses Based on Human Host Gene Expression Analysis. PLoS ONE 7(3): e33174

Analyzed Next Generation Sequencing microbiome and metegenomic data.

AstraZeneca
Safety Pharmacology Intern
March 2009 - September 2009 (7 months)
Wilmington, Delaware, United States

Lead a study in determining the effect of varying body temperature in whole body plethysmography

Assisted in study preparation, oral and intravenous dosing and safety data analysis of various central nervous system compounds in stages of pre-clinical discovery.

Utilized Culex automated blood sampling system as well as DSI telemetry devices and whole-body plethysmography chambers to measure various physiological safety parameters.

Performed jugular vein and carotid artery cannulation surgery to support on-going studies.

Lyophilization Technology, Inc
Lab Technician/Intern
September 2007 - March 2008 (7 months)

Assisted in formulation, filtration, filling, and shipping of freeze-dried parental pharmaceutical products

Composed and executed qualification validation protocols and engineering studies

Performed finish product testing such as Karl Fischer titration for moisture analysis on freeze-dried products

PECO Energy
Reliability Engineering Intern
September 2006 - March 2007 (7 months)

Reviewed and analyzed over 50 historically problematic circuits within Delaware and Chester Counties

Identified economically practical and efficient reliability solutions to frequent power outages

Presented analysis and conclusions to mentors

Education

University of Maryland College Park

Doctor of Philosophy (PhD), Biomathematics, Bioinformatics, and Computational Biology · (2012 - June 2017)

University of Pennsylvania

Master of Science (M.S.), Bioengineering · (2010 - 2011)

Drexel University

Bachelor of Science (B.S.), Biomedical Engineering · (2005 - 2010)