PAUL (MARTY) ROSS

[redacted]
linkedin.com/in/pmross

DATA ANALYSIS and VISUALIZATION

Exceptional and proven data analyst and geographic information systems specialist, looking to leverage my education and skill set in support of my community in Lake Forest Park.

Public Health:

Epidemiology | Spatial Analysis
Biostatistics | Microbiology

Project Management:

Timelines | Workplans
Tooling | Communication

Geographic Information Systems:

ArcGIS Pro | Spatial Statistics
R Geospatial | Point Pattern

Data Science:

Data Visualization | SQL
Data Quality Assessment
Software Validation
Bioinformatics | Biostatistics

Computing:

R | Python | Cloud | ArcGIS
Matlab | Java | VBA | Tableau
Word | Excel | PowerPoint

Molecular Biology:

Spatial Biology | NGS
Microbiology | Virology

PROFESSIONAL ACCOMPLISHMENTS

GIS, Data Analysis, and HealthCare

- Produced written material, maps, and figures in R from aggregated provider and survey data for the Health Care Cost Transparency Board's public-facing Health Care Cost Benchmark Report and Affordability Report, supporting insight and policy innovation.
- Leveraged spatial techniques including regression, kriging, hotspot analysis, spatial variation, K-, L-, and Moran's I functions using demographic, epidemiologic, and shapefile data in ArcGIS Pro and R.
- Completed an R and ArcGIS capstone investigating wildfire smoke preparedness and response in communities of Washington State to protect vulnerable populations and spotlight equity considerations. https://pmross0098.shinyapps.io/MRoss_SmkDaysWA
- Created an R software package used by colleagues in cloud-based Docker containers, automating the production of customer-facing PowerPoint, RMarkdown, and Shiny data reports and dashboards with AWS data delivery, supporting over 500 projects, grant applications, and collaborations.
- Built a bioinformatic software pipeline in Python & Linux/Bash to design custom assays for pathogen detection, gene expression, and target enrichment, supporting 300+ projects.

Process Development and Leadership

- Wrote SOPs, requirements, and specifications for novel technologies to guide 2 instruments, 3 products, and numerous software packages to market, tracking in GitHub and Azure DevOps.
- Developed applications in Python and R to support research in projects as diverse as Detection Chemistry, Bioinformatics, and Instrument Automation, working with stakeholders in Sales, Engineering, and Senior Management.
- Member of the inaugural DEI Committee at NanoString, guiding the development of Employee Resource Groups and a more inclusive and respectful work culture.

EXPERIENCE

Health Care Authority | Olympia, WA | Sep 2023 - Present

Cost Board Data Analyst | Aug 2024 - Present

Working in data science and analytics to identify granular areas of health care cost growth, staffing the Health Care Cost Transparency Board. Review literature on health care, gather and coalesce various data sources to support possible health care reform opportunities in the state of Washington.

- Produce advanced data visualizations for legislative and board presentations across the policy group.
- Develop enhancements to analytic methodologies.

Health Care Policy and Market Data Analyst | Sep 2023 – Aug 2024

Primary liaison and project manager for the Analytic Strategy Initiative, a grant-funded health care cost project with the University of Washington's Institute for Health Metrics and Evaluation, to better understand the cost drivers of Washington's health care spending growth.

- Produce legislative reports with analysis and data visualization.
- Staff open public meetings, producing agendas and content.

NanoString Technologies Inc. | Seattle, WA | Feb 2015 - Nov 2022

Data Scientist II | Apr 2021 - Nov 2022

Data analysis package and report development for spatial biology assays, supporting and training colleagues and customers in Docker environments for more than 300 projects.

- Parallelized cell typing and differential expression to speed workflow 4x.
- Software testing and validation for customer-facing analytic workflows.

Scientist II |Feb 2015 - YeahMar 2021

Managed more than 30 research collaborations, producing figures and reports for use in presentations, publications, and marketing collateral (ggplot, plotly, officer, RMarkdown, Shiny)

- Data analysis and experimental design for verification and validation of NGS-based spatial biology assays and instrumentation.
- Led a team to develop and release 2 hybridization-based SNV Panels to detect somatic and liquid tumor mutations in whole and cell-free DNA (ctDNA/cfDNA).

ADDITIONAL RELEVANT EXPERIENCE

Stratos Genomics Inc. | Seattle, WA |Nov 2010 - Jan 2015

Scientist

- Nanopore Sequencing, Molecular Code and Signal Design, and Matlab Signal Processing.

Senior Research Associate

- Nanopore Detection Chemistry, Molecular Characterization, LIpid Chemistry

EDUCATION

Master of Applied Science in Spatial Analysis for Public Health, 2021 – 2023
Johns Hopkins University, Baltimore, MD, **GPA: 4.0**
Bachelor of Science, B.S. in Microbiology, **Bachelor of Arts, B.A.** in History, University of Washington, Seattle, WA

CERTIFICATIONS

Certifications in **Lean Green Belt, Project Management, Meeting Effectiveness, Planview**, HCA, Olympia, WA
Certification in **Applied Biostatistics**, University of Washington, Seattle, WA

PUBLICATIONS

COVID-19 tissue atlases reveal SARS-CoV-2 pathology and cellular targets, Nature, Jul 2021

The spatially resolved transcriptional profile of acute T cell-mediated rejection in a kidney allograft, Kidney International, Jan 2022

VOLUNTEERING

Co-Chair, Technology Committee, Washington State Democrats
Elected Member, Washington State Democrats Central Committee

INTERESTS AND HOBBIES

I enjoy amateur astronomy, reading, photography, world travel, home improvement, and going to concerts and sporting events. I am also active in local politics, conducting voter outreach, recruiting volunteers, organizing fundraisers, and administering elections.