RISHABH PABBI

Data Scientist & Computational Researcher | Machine Learning | Healthcare Analytics

Victoria, BC • Mail • LinkedIn • GitHub • Website

SUMMARY

Data Scientist with 3+ years of experience building ML systems in healthcare and government. Researching antibody diffusion in cancer tumor microenvironments at UVic. Delivered patient monitoring systems adopted province-wide and digitization projects impacting millions.

TECHNICAL SKILLS

Languages: Python, R, SQL, Java, C++, Swift | **ML/AI:** TensorFlow, PyTorch, Scikit-learn, Deep Learning, NLP
Data & Cloud: Power BI, Tableau, Azure, AWS, Docker, Spark, Neo4j, PostgreSQL, MongoDB
Specializations: Bayesian Inference, Survival Analysis, Medical Imaging, Spatial Statistics, Healthcare Analytics

EXPERIENCE

Graduate Research Assistant   Jan 2025 – Present
University of Victoria   Victoria, BC
- Developing spatial statistical methods to identify sources of antibody diffusion in ovarian cancer TME
- Implementing Kernel Density Estimation to distinguish local TIL-B vs systemic antibody origins
- Built distance-based analysis pipelines comparing observed Ig patterns to theoretical diffusion models
- Collaborating with oncologists to translate source-target relationship findings into clinical insights

Healthcare Data Analyst   May – Dec 2023
Providence Health Care   Vancouver, BC
- Founding team member of Road to Recovery ($154M initiative); built dashboards tracking **1,500+ patients**
- Architected ETL pipelines using SQL and Azure, automating reporting and saving clinical staff **15+ hrs/week**
- Designed analytics monitoring treatment adherence at St. Paul's Hospital, achieving **1-day median wait time**
- Delivered production system enabling data-driven care; **expanded province-wide** across BC health authorities

Data Analyst Intern   Summer 2022
Chandigarh Administration, Government of India   Chandigarh, India
- Architected Neo4j graph database modeling land ownership hierarchies for Digital India Initiative
- Developed Python algorithms automating extraction from **50K+ records** with 98% validation accuracy
- Built SQL analytics pipelines optimizing revenue collection, increasing processing efficiency by **40%**
- Delivered solution for Chandigarh region; **scaled to 5+ metro cities**, impacting millions of citizens

PROJECTS

Tumor Microenvironment Analysis System
Python, R, Spatial Statistics, KDE, Medical Imaging | Coming to GitHub March 2026
- Built computational system to identify sources of immunoglobulin deposition in ovarian cancer TME
- Implemented KDE heat maps and distance decay analysis distinguishing TIL-B vs CD34+ vessel origins
- Developed Monte Carlo simulations comparing observed antibody patterns to diffusion models
- Created interactive visualization dashboards for spatial mapping of source-target relationships

BinkTrackerMac
Swift, SwiftUI, Core Data | Open Source on GitHub
- Developed native macOS app for personal analytics with privacy-first local-only data architecture
- Engineered modern SwiftUI interface with Core Data persistence for seamless user experience
- Built interactive data visualizations for behavioral trend analysis and habit tracking insights
- Implemented customizable tracking categories with automated reporting and export functionality

EDUCATION

MSc Statistics • University of Victoria   2025 – Present
BSc Computer Science & Statistics (Double Major) • University of Victoria   2022 – 2024
Associate of Science, Computer Science • Langara College   2019 – 2021