

Sonali Joshi

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Education

MS in Biology | August 2007 | Florida State University, Tallahassee, FL

Computational Biology, Population Genetics, Bioinformatics

MS Thesis: "Estimation of Selection Coefficient Using Approximate Bayesian Computation"

Advisor: Peter Beerli

Bachelor of Engineering | August 1998 | Pune University, Pune, India

Electronics and Telecommunication Engineering

Skills

Statistical computing - R

Programming languages - Python, C

Environments - Unix, Linux command line

Visualization software- Cytoscape

Genomic data analysis - Galaxy, R/Bioconductor

Professional Certification

Genomic Data Science, a Coursera Specialization offered by Johns Hopkins University | 2017-2018

This eight-course specialization covered Introduction to Genomic Technologies, Galaxy, Python, PANDAS, Algorithms for DNA Sequencing, Unix - Command Line Tools, R - Bioconductor, Statistics, and a Capstone project.

Professional Experience

Staff Research Associate | UCLA- School of Nursing | 2020-2021

1. Assisted the lab with pathway analysis of GWAS summary data.
2. Converted GWAS summary data for compatibility with other software, using tools (text manipulation, BEDtools) on the Galaxy server.
3. Created customized tools for processing large files with Python (PANDAS).
4. Pathway and Key Driver Analysis using Mergeomics.
5. Visualization of network graphs with Cytoscape.

Senior Software Engineer | 3i Infotech, Mumbai, India | 2001 – 2003

1. Developed and maintained www.icicidirect.com, an online trading and investment website.
2. Worked with clients to understand the stock trading business requirements and translated them to the system.
3. Supported the backend IT operations in a time-sensitive, high pressure environment of a real time stock trading platform.
4. Worked on the middleware platform TUXEDO, UNIX, C and Oracle.
5. Supported the documentation requirements necessary for ISO certification.

Software Engineer | Godrej Consumer Products, Mumbai India | 1999 – 2001

1. Implemented and customized the ERP system (MFG/PRO) for the consumer products division.
2. Worked with clients to understand the supply chain and distribution system requirements of one of India's largest manufacturers of soap.
3. Worked with users of the system to understand their day-to-day operations.
4. Translated the learning to implementing and customizing the company's ERP system.
5. Trained users on system operations in major cities in India.

Contribution to papers

SY Jung, JC Papp, M Pellegrini, H Yu, EM Sobel (2021). [Molecular Biology Networks and Key Gene Regulators for Inflammatory Biomarkers Shared by Breast Cancer Development: Multi-Omics Systems Analysis](#). *Biomolecules* 11 (9), 1379.

SY Jung (2021). [Multi-Omics Data Analysis Uncovers Molecular Networks and Gene Regulators for Metabolic Biomarkers](#). *Biomolecules* 11 (3), 406.

Volunteer Experience

Girl Scouts | Troop Leader | 2016 - present

An ongoing commitment where I mentor girls, chaperone camping trips, plan and lead bi-monthly meetings, manage troop funds and financial records, coordinate troop activities, and manage product sales.

Clover Ave Elementary Booster Club | 2013 – 2019

Organized fundraising events. Coordinated 300+ parent volunteers for events that raised up to \$30,000 for the school.

References

Dr. Su Yon Jung, Assistant Professor in the UCLA School of Nursing - sjung@sonnet.ucla.edu

Dr. Peter Beerli, Professor, Dept. of Scientific Computing, Florida State University - beerli@fsu.edu