

# ROHIT GUPTA

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Research Engineer, Stanford University  
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## CURRENT POSITION

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**Research Engineer** , *Stanford University, CA*

12/2024 – Present

- I lead the genomics, bioinformatics, and algorithm development for analysis for adult and pediatric brain tumors at the Solomon Lab in the Stanford Cancer Institute

## EDUCATION

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**PhD. in Quantitative and Systems Biology**

08/2013 - 06/2019

University of California, Merced

Thesis - "Genomic & Biophysical Interrogation of Oncogenic Factors in Melanoma"

**Bachelor of Technology in Bioinformatics**

07/2008 - 06/2012

Vellore Institute of Technology

Thesis - "Automated construction of polyunsaturated fatty acid autoxidation reaction network using machine learning based pattern matching algorithm."

**Bachelors' Thesis**, Molecular Systems Biology Group ; Salvador Lab

02 - 06/2012

University of Coimbra, Portugal

## PAST EMPLOYMENT

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**Clinical Informatics Specialist** , *University of California, San Francisco, CA*

06/2019 - 11/2024

- Led development and implementation of a genome-wide DNA methylation profiling clinical test to better classify cancers of the brain, kidney, and other organs, with the aim of improving patient outcomes.
- Managed genomic and clinical team responsible for all aspects of data generation and analysis of single-cell, bulk RNASeq, methylation and, copy number profiling for clinical use at the Department of Pathology.
- Implemented automation workflows for execution and reporting of test result through integration of HIPAA compliant EHR and DNA Nexus server instances.

**Immuno-Oncology Summer Intern** , *Merck & Co., West Point, PA*

06 – 08/2016

- Investigating metagenomic *NGS (Next-Gen Sequencing)* data from the gut microbiome of patients in the Merck clinical trial, MK-6072.

**Junior Specialist** , Filipp Lab, *University of California, Merced*

12/2012 – 07/2013

- Analyzing NGS data for *(PKM2)* gene obtained from *The Cancer Genome Atlas (TCGA)* and *CGHub* database. The project aimed at retrieval, management, and analysis of sequencing data.

**Junior Specialist** , Savageau Lab, *University of California, Davis*

08 – 12/2012

- Statistical modeling and mathematical verification of Restriction-Modification system in *E.coli*. The project aimed at constructing a working mathematical model using RNASeq expression data from PvuII gene expression.

**Data Mining Research Intern** ; *X-Code Life Sciences, Bangalore*

01 – 04/2011

- Analyzing the oncogenic effects and disease association of germline mutations (SNP) in NGS data using genome-wide association studies (GWAS).

## ACADEMIC SERVICE

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- Academic Editor; Editorial Board – International Journal of Genomics. Editorial Board Outlink.
- Reviewer(By Invitation)–International Journal of Genomics. (*Volume 2024 — Article ID 9953367*)
- Reviewer(By Invitation)–European Journal of Cancer Care. (*Volume 2023 — Article ID 8504968*)
- Reviewer(By Invitation)–Journal of Clinical Pharmacy and Therapeutics. (*Volume 2023 — Article ID 9996553*)
- Reviewer(By Invitation)–The Breast Journal. (*Volume 2023 — Article ID 9117047*)
- Reviewer(AdHoc)–Journal of Cell Biology and Genetics.(*JCBG-03.08.14-0037*)

- Teaching Assistant BIO175 (Biostatistics)-Spring'15 ; BIO180 (Math Modeling in Biology)-Spring'18.

## PUBLICATIONS

Citations - 679; h-index - 13 (OpenAlex - 10/2026) \* = Equal Contribution

- J18 A Papanicolau-Sengos, ..., **Rohit Gupta**, et al. '*DNA Methylation-Based Classification of Kidney Neoplasms*' Modern Pathology 38, 100884 (2025)
- J17 S Pan, ..., **Rohit Gupta**, et al. '*Tumor heterogeneity underlies clinical outcome and MEK inhibitor response in somatic NF1-mutant glioblastoma*' JCI Insight 10 (2025)
- J16 CHG Lucas, ..., **Rohit Gupta\***, et al. '*Longitudinal multimodal profiling of IDH-wildtype glioblastoma reveals the molecular evolution and cellular phenotypes underlying prognostically different treatment responses*' Neuro-Oncology 27, 89–105 (2025)
- J15 EA Williams, A Ravindranathan, **Rohit Gupta**, et al. '*Novel SOX10 indel mutations drive schwannomas through impaired transactivation of myelination gene programs*' Neuro-Oncology 25, 2221–2236 (2023)
- J14 S Hadad, **Rohit Gupta\***, et al. '*“De novo replication repair deficient glioblastoma, IDH-wildtype” is a distinct glioblastoma subtype in adults that may benefit from immune checkpoint blockade*' Acta Neuropathologica 147 (2023)
- J13 M Terry, **Rohit Gupta\***, et al. '*Somatic mosaic SOX10 indel mutations underlie a form of segmental schwannomatosis*' Acta Neuropathologica 146, 857–860 (2023)
- J12 CHG Lucas, **Rohit Gupta**, et al. '*EWSR1-BEND2 fusion defines an epigenetically distinct subtype of astroblastoma*' Acta Neuropathologica 143, 109–113 (2022)
- J11 EA Sloan, **Rohit Gupta\***, et al. '*Intracranial mesenchymal tumors with FET-CREB fusion are composed of at least two epigenetic subgroups distinct from meningioma and extracranial sarcomas*' Brain Pathology 32 (2022)
- J10 CHG Lucas, EA Sloan, **Rohit Gupta**, et al. '*Multiplatform molecular analyses refine classification of gliomas arising in patients with neurofibromatosis type 1*' Acta Neuropathologica 144, 747–765 (2022)
- J9 J Wu, **Rohit Gupta**, et al. '*Tumor DNA requirements for accurate epigenetic-based classification of CNS neoplasia*' Neuro-Oncology 23, 1798–1800 (2021)
- J8 **Rohit Gupta**, CHG Lucas, et al. '*Low-grade glioneuronal tumors with FGFR2 fusion resolve into a single epigenetic group corresponding to “Polymorphous low-grade neuroepithelial tumor of the young”*' Acta Neuropathologica 142, 595–599 (2021)
- J7 B Ramani, **Rohit Gupta\***, et al. '*The immunohistochemical, DNA methylation, and chromosomal copy number profile of cauda equina paraganglioma is distinct from extra-spinal paraganglioma*' Acta Neuropathologica 140, 907–917 (2020)
- J6 CHG Lucas, **Rohit Gupta\***, et al. '*Comprehensive analysis of diverse low-grade neuroepithelial tumors with FGFR1 alterations reveals a distinct molecular signature of rosette-forming glioneuronal tumor*' Acta Neuropathologica Communications 8 (2020)
- J5 G Mondal, ..., **Rohit Gupta**, et al. '*Pediatric bithalamic gliomas have a distinct epigenetic signature and frequent EGFR exon 20 insertions resulting in potential sensitivity to targeted kinase inhibition*' Acta Neuropathologica 139, 1071–1088 (2020)
- J4 EA Sloan, S Hilz, **Rohit Gupta**, et al. '*Gliomas arising in the setting of Li-Fraumeni syndrome stratify into two molecular subgroups with divergent clinicopathologic features*' Acta Neuropathologica 139, 953–957 (2020)
- J3 L Edwards, **Rohit Gupta**, FV Filipp '*Hypermutation of DPYD Deregulates Pyrimidine Metabolism and Promotes Malignant Progression*' Molecular Cancer Research 14, 196–206 (2016)
- J2 J Guan, **Rohit Gupta**, FV Filipp '*Cancer systems biology of TCGA SKCM: Efficient detection of genomic drivers in melanoma*' Scientific Reports 5 (2015)
- J1 **Rohit Gupta\***, M Mishra, P Tandon, R Hisaria '*Novel mutation predicted to disrupt SGOL1 protein function*' Egyptian Journal of Medical Human Genetics 14, 149–155 (2013)

## INVITED TALKS, ORAL PRESENTATION AND CONFERENCES

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Selected Talks- 1 ;    Invited Talks - 0 ;    Conferences - 6

- T1 Rohit Gupta, Fabian Filipp '*Cancer Systems Biology of Melanoma to identify cancer drivers*' ISCB Great Lakes Bioinformatics Conference GLBIO, Purdue University, May 2015.
- C6 Rohit Gupta, Fabian Filipp '*Targeted regulation in TCGA-SKCM led by DNMTs (1,3a 3b) induced methylation*'. Stanford Cancer Systems Biology Symposium, Palo Alto, May 2018.
- C5 Rohit Gupta, Fabian Filipp '*Detecting cancer drivers from TCGA SKCM dataset*' Big Data in Biomedicine Conference, Stanford University, Palo Alto, May 2015.
- C4 Rohit Gupta, Fabian Filipp '*Cancer Systems Biology of Melanoma to study the eminent driver genes in TCGA SKCM dataset*' UC Global Health Day 2015 (UCGHD), Los Angeles, April 2015.
- C3 Rohit Gupta, Fabian Filipp, Michael Colvin '*Simulations of the structural switch in PKM2 mediating the Warburg Effect in Cancer*' 58th Annual Biophysical Society Meeting, San Francisco, February 2014.
- C2 Rohit Gupta, Ambuj Kumar '*Designing a medical data publishing security algorithm by advancement of k-Anonymity and (n, t) closeness technique*' 22nd International Genome Informatics Conference (GIW), South Korea, December 2011.
- C1 Rohit Gupta '*Genomic and Structural analysis of -myosin S2 fragment mutations involved in congenital Heart Disorders in Humans*' IEEE Bioinformatics Biomedicine Conference (IEEE BIBM), Atlanta, November 2011.

## FELLOWSHIPS, HONORS, AND AWARDS

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- 2015 USAP Summer Research Fellowship; UC Merced.
- 2015 QSB Travel Awards; UC Merced.
- 2015 UC Global Health Day Travel fellowship and Registration waiver.
- 2012 Semester Abroad Program (SAP) scholarship for bachelors thesis; Vellore Institute of Technology.

## RESEARCH RECOGNITION

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- Research article (J2 / Sci Rep. 2015 Jan 20;5:7857) featured on abc30 news ([abc30.com/504808](http://abc30.com/504808)) , Merced Sun-Star, Los Banos Enterprise and UC Merced news.

## RELEVANT SKILLS

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- *Programming Languages* ; Top 3 - R, Python (scikit, numpy, pandas) and Bash
- *Bioinformatics tools* - GATK, GROMACS, Tuxedo Suite, GSEA, Omicsoft, Variant Calling tools, NGS Preprocessing & Analysis tools, CHIP-Seq analysis tools, MetPhlAn2, phyloseq, single-cell RNA processing and analysis.
- *Technologies* - Linux Administration, Database Management Systems (Oracle 9i, SQL), High Performance Computing (HPC), AWS

## PROFESSIONAL MEMBERSHIP

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- International Society of Computational Biology (ISCB)
- International Associations of Engineers (IAENG)

## COMMUNITY SERVICE

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- Module Lead & Instructor: Math/Computer Science Module, BiotaQ, 2017  
Designed and taught R programming using Raspberry Pi to high school seniors at Yosemite High, Merced, CA.
- Founding Member & Editor: RadioBio podcast.