

# BHUMIKA BHATT

1981 Saint Lawrence Dr #9, Santa Clara, CA 95051 • (408)-668-4251 • contact@bhumikabhatter.org  
bhumikabhatter.org • linkedin.com/in/bhumika-bhatt-phd • github.com/bbhatt001

## EDUCATION

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**M.S., Computer Science**, Georgia Tech., USA      *GPA: 3.8*      *Aug 2020 - Dec 2022*  
**Ph.D., Biochemistry and Molecular Biology**, Medical Univ. Vienna, Austria      2009 - 2015  
**M.Sc., Biomedical Science**, Univ. Delhi, India      2007 - 2009  
**B.Sc., Microbiology**, Univ. Delhi, India      2004 - 2007

### Computer Science Courses

*Intro to graduate algorithms; Machine Learning; Deep Learning; Database Systems Concepts and Design; Data and Visual Analytics; Software Development Process; Human-Computer Interaction; Knowledge-Based AI; Machine Learning for Trading; AI, Ethics, and Society*

**Languages & Frameworks:** *Python, Java, R, SQL, Pandas, Spark, scikit-learn, Keras, PyTorch, CSS, HTML, Javascript*

## MACHINE LEARNING AND SOFTWARE ENGINEERING: SELECT EXPERIENCE

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### Independent research on retractions in biomedical literature *Feb 2019*

- Analyzed various factors and trends in retractions in biomedical literature, including those of authors, journals, and countries
- Employed sophisticated data collection and analysis techniques to use data from PubMed, Wikipedia, and WikiData in Python
- Analyzed themes and fields of retracted literature using Natural Language Processing techniques
- **Peer-reviewed Publication: Bhatt, B.(2021)** A multi-perspective analysis of retractions in life sciences. *Scientometrics* 126, 4039-4054

### Gender-based Analysis of Breast Cancer *May 2020*

- Used SEER (Surveillance, Epidemiology and End Result) data
- Analyzed differences in tumor specific attributes for male and female breast cancers. Performed propensity score matching and survival analysis for male and female breast cancers using python, R.
- Discovered that male and female breast cancer specific survival are similar
- **Published** the findings in a blog article on bhumikabhatter.org

### Major Course Projects *Aug 2020 - Present*

- Transformer-based automatic text summarization through global semantics.
- BERT-based Twitter sentiment analysis to assess emotional impact of COVID on US population

## OTHER EXPERIENCE

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### Invited Peer Reviewer for major CS Journals & Conferences *Various dates*

- IEEE conference on data mining; Computers in biology & medicine; Computers, materials & continua

### Ph.D. Research *2009 - 2015*

- **Publication:** Zuzuarregui et al (2012) M-Track: detecting short-lived protein-protein interactions in vivo. *Nature Methods* 9, 594- 596 \* **Shared equal first authorship**

### Postdoctoral Research, Sanford Burnham Prebys Medical Discovery Institute *2015 - 2016*

## AWARDS & HONORS

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- *Sanofi Stiftung Award 2012:* Best publication in Medical Univ. Vienna, for Nature Methods article
- *Junior Research Fellowship 2009:* Council for Scientific and Industrial Research, India; Qualified
- *“Catch Them Young – Human Resources Development for Biomedical Research” scholarship 2007-2009:* Council for Scientific and Industrial Research, India