

Navtej Singh

- CONTACT INFORMATION *Email* singhnav@umich.edu
Website www.singhnav.com
Citizenship United States of America
- EDUCATION **The University of Michigan**, Ann Arbor, Michigan USA
Masters of Science Degree, Pure Mathematics, August 2023-
- The State University of New York**, Stony Brook, New York USA
Masters of Arts Degree, Pure Mathematics, August 2022-May 2023
Teaching: Graduate Teaching Assistantship, August 2022-May 2023 (waived)
- The University of Michigan**, Ann Arbor, Michigan USA
Graduate Coursework, Pure Mathematics, January 2018-May 2020
Involvement: Volunteer at GROW 2018 conference
- The University of Chicago**, Chicago, Illinois USA
A.B., Economics, September 2009-December 2013
Involvement: Student Government Class Representative, Founder and President of Pharmakon student research organization, Vice President of The Triple Helix, Chicago Area Undergraduate Research Symposium CFO and School Representative, Member of the College Bowl Team
- HONORS AND AWARDS The Broad Institute of MIT and Harvard: Inaugural Metcalf Research Fellowship, 2013
Quiz Bowl National Championship: 1st Place Undergraduate Team, 2013
The University of Chicago: Odyssey Scholarship, 2009-2013
Fraser High School: Valedictorian, 2008
- PAPERS PUBLISHED Larson S., Singh N., Maheshwari S., Stewart S., Krishnaswamy U. (2021) *Exploring Out-of-Distribution Generalization in Text Classifiers Trained on Tobacco-3482 and RVL-CDIP*. In: Barney Smith E.H., Pal U. (eds) Document Analysis and Recognition ICDAR 2021 Workshops. ICDAR 2021. Lecture Notes in Computer Science, vol 12917. Springer, Cham.
https://doi.org/10.1007/978-3-030-86159-9_30 / <https://arxiv.org/abs/2108.02684>
- PAPERS IN PREPARATION Lerner-Brecher M., Church B., Hyungdai C., Jing M., Singh N.
On the Shioda Conjecture for Diagonal Projective Varieties over Finite Fields.
http://www-personal.umich.edu/~singhnav/Shioda_Conjecture.pdf
- Gajewski A., Goldin E., Safin J., Singh N., Zhang J. *Optimization on Symplectic Embeddings.*
http://www-personal.umich.edu/~singhnav/Optimization_on_Symplectic_Embeddings.pdf
- PATENTS PENDING **SkySync, Inc** Larson S., Singh N., Woodward S., Brazeau M. *Accessing, Classifying, and Taking Action on Documents using Natural Language Processing*, 2021
- RESEARCH EXPERIENCE **Columbia University**, New York City, New York USA
Research Experiences for Undergraduates **June 2019-August 2019**
Constructed novel symplectic embeddings using neural networks
Advisor: Prof. Kyler Siegel

Research Experiences for Undergraduates **June 2018-August 2018**
Determined new families of supersingular diagonal projective varieties over finite fields
Advisors: Profs. Daniel Litt and Alexander Perry

The Broad Institute of MIT and Harvard, Cambridge, Massachusetts USA

Metcalf Research Fellowship **June 2013-August 2013**
Computationally analyzed strain-specificity of malaria vaccine
Advisor: Dr. Daniel Neafsey

The University of Chicago, Chicago, Illinois USA

Research Assistantship **August 2012-June 2013**
Computationally modeled electroshock discharge in human tissue
Advisor: Prof. Raphael Lee

Research Assistantship **June 2012-August 2012**
Described innovation diffusion process for Thirty Million Words project
Advisor: Prof. Dana Suskind

Research Assistantship **June 2012-August 2012**
Surveyed Allais paradox in agricultural populations
Advisor: Prof. John List

Research Assistantship **June 2010-August 2011**
Assayed localization and recycling of Nicotinic Acetylcholine Receptors
Advisor: Prof. William Green

PROFESSIONAL
EXPERIENCE

OptImage, LLC, Ann Arbor, Michigan USA

Founder **October 2021-Present**
Conducted data science and analytics in the Business Interfaces group

Facebook, Inc, Menlo Park, California USA

Data Scientist (remote) **May 2021-October 2021**
Conducted data science and analytics in the Business Interfaces group

SkySync, Inc, Ann Arbor, Michigan USA

Senior Machine Learning Engineer (remote) **November 2020-May 2021**
Designed and developed machine learning models for document classification and other natural language processing tasks

CACTIVATE, LLC, Boston, Massachusetts USA

Co-founder, Chief Data Scientist, Advisor (remote) **January 2017-November 2020**
Led machine learning research and development efforts at advertising technology startup company
Helped company close seed/angel fundraising round; MassChallenge 2020 winner

Infinite Analytics, Inc, Cambridge, Massachusetts USA

Data Scientist **August 2015-December 2016**
Designed deep learning models for computer vision and recommendation systems

Neumitra, LLC, Boston, Massachusetts USA

Data Scientist **May 2015-August 2015**
Designed algorithms to detect galvanic skin response for a wearable device

Mojulus, LLC, Detroit, Michigan USA

Software Engineer

Developed distributed computing web applications

January 2014-April 2015

PROGRAMMING
LANGUAGES

Python, Sage, Haskell, C, R, SQL, MATLAB, Mathematica, JavaScript/Node, HTML/CSS, L^AT_EX

NATURAL
LANGUAGES

English (Native), Punjabi (Native), Hindi (Fluent), Urdu (Fluent), Spanish (Fluent), French (Proficient), Arabic (Basic), German (Basic)