Danishjeet Singh

singhdan.me| danishjeetsingh@gmail.com | 812.803.5457 | singhdan@iu.edu

EDUCATION

INDIANA UNIVERSITY
B.S. Computer Science
Minors: Data Science and Statistics
May 2025 | Bloomington, IN
GPA: 3.7 / 4.0

MEDIA COVERAGE

IEEE Spectrum (Feb 2024) [1]
Sherwood News (July 2024) [1]

COURSEWORK

GRADUATE
Elements of Artificial Intelligence
Computer Vision
Applied Algorithms

UNDERGRADUATE
Selected coursework
Calculus I & II
Exploratory Data Analysis
Data Modeling and Inference
Machine Learning
Data Structures

SKILLS

Python • R • Java •
Shell • SQL • Javascript •
LaTeX • C • C++ • HTML • CSS •
PyTorch • .NET • React • Next.JS •
GCP • Postgres • MongoDB •
Tableau • Git • Linux •

HONORS & AWARDS

Luddy Academic Dean's List (2021-24)

Hutton Honors College Travel Grant ($600) 2024

Hutton Honors Research Partnership Grant ($3000) 2023

SERVICE

Guest Lecturer: Social Media Theory and Practice (MSCH-B 360), IU Bloomington, Spring 2024
Conference Reviewer: ICWSM(2024);
Student Leadership: IU Undergraduate Research Ambassador (2024); Luddy Student Ambassador for Computer Science (2022-24); Sikh Student Association at IU(2021-24);

RESEARCH

OBSERVATORY ON SOCIAL MEDIA AT IU | Research Assistant

Jan 2023 – Present | Bloomington, IN

- Worked with **Dr. Kaicheng Yang** and **Prof Filippo Menczer**.
- Detection of fake accounts with AI Faces on social media platforms; VLM based AI media detection; Comparing the Toxicity of Responses to Imagery on Twitter and Facebook
- Reduced image similarity analysis duration from 14 days to just 3 minutes, processing 860 million comparisons through parallel computing with a 99.98% reduction in runtime.
- Utilizing Transformer models such as CLIP to perform image topic modeling and compare the spread of toxicity on different social media platforms such as Meta and Twitter(X)
- Optimizing Open-source Vision-Language Models (VLMs) to accurately detect and reason about AI-generated faces.

IU COMPUTER VISION | Research Assistant

May 2022 – Jan 2023 | Bloomington, IN

- Worked with **Prof David Crandall**.
- Implemented Generative AI models, including Image Diffusion Models and Generative Adversarial Networks (GANs), to perform server benchmarking and evaluate the performance capabilities of current server infrastructure.
- Explored various deep learning models and feature-based clustering techniques to understand strategies for creating high-quality datasets, drawing inspiration from how toddlers learn efficiently with limited data.

EXPERIENCE

LUDDY SCHOOL OF INFORMATICS, COMPUTING, AND ENGINEERING | Front-end Developer Intern

Oct 2021 – Aug 2022 | Bloomington, IN

- Created and managed the Luddy Living Learning Center(LLC) website by implementing User Testing and actively evaluating feedback to improve the User Experience, while using The WCMS Expression Engine.

PUBLICATIONS

[1] K. Yang, **Singh, Danishjeet**, and F. Menczer. Characteristics and prevalence of fake social media profiles with ai-generated faces. *Journal of Online Trust and Safety*, (4), Sep 2024.

PRESENTATIONS

- Characteristics and prevalence of fake social media profiles with AI-generated faces
  International Conference on Computational Social Science (Philadelphia, USA)
  July 2024

SOFTWARE AND TOOLS

- `SciPair`: A tool to explore relationships between authors using data from OpenAlex. Compare authors, visualize co-authorships and citations.