Dyuthi Dinesh

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EDUCATION

Columbia University, New York City, USA *Sept 2024 – May 2025*
M.A. Quantitative Methods in the Social Sciences, GPA: 4.0/4.0

Master's Thesis: Examining and Profiling Individual Differences among Social Media Users based on Misinformation Engagement Behaviors

Machine Learning, EDA and Visualization, Causal Inference, Data Mining, Natural Language Processing

University of British Columbia, Kelowna, Canada *Sept 2018 – Apr 2022*
B.Sc.(Hons) Psychology, GPA: 94.9%; Dean's List

Honors Thesis: Investigated COVID-19 vaccine hesitancy quantitatively (using social and psychological predictors)

Advanced Statistics & Research Methods, Experimental Design, Data Analysis, Psychology/Biology & Neuroscience

RESEARCH EXPERIENCE

Research Assistant *May 2026 – Present*
Centre for Neuroscience, Indian Institute of Science (IISc), Bangalore

- With **Prof. Srikanth Padmala**: Studying the neural mechanisms of emotion-cognition interactions using computational modeling on cognitive behavioral paradigms in decision-making.
- Implementing Drift Diffusion Modeling (DDM) to evaluate underlying cognitive mechanisms of decision-making under high perceptual load vs. low perceptual load.

Research Associate *January 2025 – Present*
Cognitive Media Lab, University of California, San Diego

- Master's Thesis (Submitting for publication): Used multiple regression models to analyze user interactions with 36 COVID-19 misinformation tweets and identify key drivers of misinformation spread, achieving an R^2 of 0.45.
  - Conducted Silhouette Analysis/K-Means Clustering to segment 800+ users into 3 personas based on passive and active misinformation engagement patterns, revealing potential high-risk amplifier groups.
- Conducting Conjoint Analysis and Cluster Analysis of abortion pill marketing on social media. Studying interaction effects between variables that affect source trustworthiness.
- Co-authored research manuscript comparing LLM performance to pharmacists, nurses, and practitioners, contributing to the background, introduction, and results sections for a peer-reviewed publication (Submitted).

LLM-Powered Mental Health Support Tool *January 2025 – May 2025*
Columbia University Practicum

- Designed end-to-end workflow for HIPAA-compliant mental health chatbot incorporating informed consent, CBT-based interventions, and crisis escalation protocols aligned with clinical best practices.
- Established 10 safety and relevance metrics for AI mental health systems, including response appropriateness, risk detection accuracy, therapeutic alliance measures, and clinical datasets for model training

Dr. Carolyn Szostak's lab *September 2020 - September 2022*
University of British Columbia

- ***Honours Student (PSYO 490B)***: Studied individual differences that contribute to COVID-19 vaccine hesitancy and conspiracy beliefs. Conducted literature reviews, compiled measures, and developed questionnaires using Qualtrics. Created consent and debriefing forms. Considered appropriate statistical tests for analysis, and conducted data analysis. Presented the results in two conferences, and completed an honors thesis manuscript.
- ***Directed Studies (PSYO 381B)***: Helped conduct research for the "Media & Climate Change" study: including literature review, data analysis, and writing an academic IMRD paper.
- ***Volunteer***: Conducted a scoping review (using Covidence) regarding student well-being and academic accommodation.

The Truth and Trust Lab, UBC *January 2020 - April 2022*
University of British Columbia

- ***Directed Studies Student (PSYO 481A)***: Designed study to facilitate lie and truth conditions during a dyadic conversation to evaluate deception detection in real-life conversations.
- Presented the study design and methods to the research team.
- Moderated interview-styled conversations between participants on Zoom.

The Psychopathology Lifespan and Neuropsychology (PLAN) Lab *Sept-Dec 2019; Oct 2020 - Feb 2021*
University of British Columbia

- ***Volunteer***: Ran participants for the "Gratitude study" which evaluated the effects of gratitude-focused mindfulness on body image perceptions.

The Health Psychology Lab *September 2019 - February 2020*
University of British Columbia

- ***Volunteer***: Ran participants for the "Lean on Me" study which studied the effects of social support on stress. Collected data on tweet deck for a Twitter-based study exploring the use of crisis text line. collected data from Facebook for a study based on chronic fatigue syndrome and the emotions expressed on Facebook posts.

WORK EXPERIENCE

Teaching Assistant, Applied Data science; Natural Language Processing *January 2025 – May 2026*
Columbia University, New York City

Research Associate *June 2025 – Present*
Haupt Data Analytics & Consulting, New York City

- Conducted A/B testing using Qualtrics for survey administration, and Python and R for data analysis of 10000+ responses for the University of South Carolina Ad Campaign preferences among panel and list participants.
- Used Natural Language Processing to improve brand marketing strategies by extracting 10+ recurring themes from 10,000+ open-ended responses, and identified key brand perception drivers for the University of South Carolina.
- Evaluated LLM accuracy on pharmaceutical data analysis tasks, benchmarking GPT-4 outputs using traditional inferential statistics (t-tests, chi-squared, regression) across 500+ test cases.

Data Intern *June 2025 – August 2025*
Columbia Business School, New York City

- Developed student pathways based on career interests to segment students into 5 clusters based on elective selection across 4000+ courses.

Clinical Researcher *September 2022 – July 2024*
Wysa (AI Conversational Agent), Bangalore, India

- Generated real-world evidence of digital mental health intervention efficacy in peer-reviewed publications using Logistic Regressions, K-Means Clustering, and advanced statistical methods (ANOVAs, t-tests, other inferential statistics) to analyse multi-modal RWD from 1M+ users.

- Leveraged statistical power analysis and effect size calculations to optimize Randomized Controlled Trials (RCT).
- Identified **multimodal distress patterns** across **5M+ global crisis conversations** informing AI model safety protocols and reducing inappropriate responses.

Teaching Assistant *January 2022 - April 2022; September 2020- April 2021*
University of British Columbia
PSYO 271: Introduction to Data analysis; **PSYO 121:** Introduction to Psychology: Personal Functioning; **PSYO 270:** Introduction to Research Methods and Design; **PSYO 111:** Introduction to Psychology

PUBLICATIONS

- Haupt, M. R., Yang, L., **Dinesh, D.**, Pan, E., Huang, X., Ashraf, A. R., Domián, B. M., Fittler, A., Vida, R. G., & Mackey, T. K. [Manuscript under revision]. Investigating the impact of prompt engineering on ChatGPT's ability to generate and evaluate pharmaceutical medicines advice. Research in Social and Administrative Pharmacy.
- **Dinesh DN**, Rao MN, Sinha C. (2024). Language adaptations of mental health interventions: User interaction comparisons with an AI-enabled conversational agent (Wysa) in English and Spanish. *Digital Health*, 10. doi:10.1177/20552076241255616
- Sinha C, **Dinesh D**, Heaukulani C, Phang YS. (2024). Examining a brief web and longitudinal app-based intervention [Wysa] for mental health support in Singapore during the COVID-19 pandemic: Mixed-methods retrospective observational study. *Frontiers in Digital Health*, 6, 1443598. doi:10.3389/fdgth.2024.1443598
- Sinha C, Thakkar R, Meheli S, **Dinesh D**. (2026). Exploring the Role of App Features in Providing Continuity of Care to Users on a Digital Mental Health Platform (Wysa): Retrospective Mixed Methods Observational Study. *JMIR Form Res 2026;10:e73033*. doi:10.2196/73033

SKILLS

Research: Experimental Design, Hypothesis & A/B Testing, Correlational & Causal Inference, Survey Design, IRB Compliance, Sample Size & Power Analysis, Clinical Research (RCT), Computational Modeling

Programming: Python, R, SQL, PySpark

CONFERENCE PRESENTATIONS

- Haupt M, Dinesh D, Mackey TK. Developing and Testing Generative AI Tools for SUD Treatment Providers. College on Problems of Drug Dependence (CPDD) 2026 Annual Meeting, June 2026; Portland, Oregon.
- Interdisciplinary Student Health Conference (ISHC), Kelowna, Canada (March 2022)
- Psychology Undergraduate Research Conference (PURC), University of British Columbia, Canada (March 2022)

AWARDS

International Major Entrance Scholarship (2018-2022) — Outstanding International Student Award (2018)
Deputy Vice-Chancellor Scholarship for International Students (2019-2021) — International Student Faculty Award (2019)
The Faculty of Science International Student Award (2020) — International Undergraduate Research Award (2021) — Best Honours Presentation, PURC UBC (2022)