

# SUBIGYA NEPAL

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## EDUCATION

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- JUN 2024 | **PhD in COMPUTER SCIENCE**  
Dartmouth College, NH, USA
- 35+ Papers (10 first-authored), h-index: 14, citations: 1400+
  - Grad-level coursework: Deep Learning, Artificial Intelligence, Machine Learning & Statistical Analysis, Applications of Data Science, Cognitive Computing, Concurrent Algorithms, Robot Design & Programming, Introduction to Human-Computer Interaction (HCI)
  - Research Interests: Applied Machine Learning, AI, Passive Sensing, Mobile/Digital Health, Mental Health and Well-being.
  - Thesis: [Toward the Integration of Behavioral Sensing and Artificial Intelligence](#)
  - Committee: Dr. Andrew T. Campbell (Chair), Dr. Mary P. Czerwinski, Dr. Nicholas C. Jacobson, Dr. Sarah M. Preum

## RESEARCH EXPERIENCE

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- SEP 2024  
TO AUG 2025 | **STANFORD UNIVERSITY, USA**  
*Postdoc Fellow, Stanford Institute for Human-Centered Artificial Intelligence (HAI)*
- Incoming postdoc at HAI, focusing at the intersection of AI and mental health using sensing technologies and personality dynamics.
- Mentor: Dr. [Gabriella Harari](#)
- SEP 2018  
TO JUNE 2024 | **DARTMOUTH COLLEGE, USA**  
*Graduate Research Assistant*
- Developed mobile and wearable apps for mental health and wellbeing studies, enabling cross-device communication and real-world participant tracking across clinical, student, and workplace populations.
  - Analyzed extensive longitudinal data with advanced machine learning and deep learning techniques to assess and predict human behavior, specifically focusing on mental health and wellbeing.
  - Participated in multidisciplinary, multi-university collaborative research, particularly with psychologists, psychiatrists, and brain scientists, to identify research challenges and provide technical solutions.
  - Led the design, data collection, cleaning, feature engineering, and machine learning modeling for various NSF/NIH mobile sensing projects at Dartmouth College.
  - Published innovative research in top-ranked journals and conferences in Computer Science, including ACM IMWUT and CHI, contributing to the fields of mobile sensing, machine learning, and human behavioral modeling.
- Core competencies:** Application Development, Human-Centered Study Design, Longitudinal Data Analysis, Machine Learning, Deep Learning, Digital Phenotyping, Mental Health, Digital Health, HCI, IRB, Data Visualization, Quantitative and Qualitative Research Methods
- JUN 2023  
TO SEP 2023 | **MICROSOFT RESEARCH, CAMBRIDGE, MA, USA**  
*Research Intern, Human Understanding and Empathy group*
- Conducted research on the efficacy of Large Language Models (LLMs) in enhancing productivity and well-being among information workers.
  - Executed two studies: an initial user study followed by a subsequent study involving participant interaction with chat agents.
  - Investigated prompt engineering techniques and developed prototypes comparing a chat agent with a generic dashboard to aid information workers in better understanding their workplace behaviors.
  - Engaged in an iterative design process for refining hypotheses and research objectives.
  - Collaborated effectively with team members and interns, actively involving additional stakeholders in the research process.
  - Presented research findings to key stakeholders and led the preparation of the manuscript.
- Mentors: Drs. [Javier Hernandez](#), [Mary Czerwinski](#)  
**Core competencies:** LLMs, User Studies, ChatGPT, Prompt Engineering, Chat Agents, Prototyping, User Experience (UX)
- JUN 2022  
TO SEP 2022 | **MICROSOFT RESEARCH, REDMOND, WA, USA**  
*Research Intern (Remote), Human Understanding and Empathy group*
- Spearheaded two key projects aimed at investigating well-being in the workplace.
  - Project 1: Understanding the dynamics between workplace rhythms and employee well-being.
  - Project 2: Fundamental research on burnout among cybersecurity workers.
  - Managed the entire research pipeline, encompassing study design, ethics review, data collection, analysis, and presentation of results.
  - Facilitated cross-team collaboration and maintained effective communication with a diverse range of stakeholders.
  - Authored two primary manuscripts; one was published at CHI 2023, and the other at CSCW 2024.
- Mentors: Drs. [Javier Hernandez](#), [Mary Czerwinski](#)  
**Core competencies:** Project Leadership and Management, Workplace Behaviors, Employee Wellbeing Research, Burnout Analysis, Study Design and Execution, Ethics Review and Compliance, Cross-teams collaboration and Communication

## OTHER PROFESSIONAL EXPERIENCE

AUG 2015 TO AUG 2018	<b>TECHLEKH SERVICES PVT. LTD., NEPAL</b> <i>Co-Founder &amp; CTO</i> <ul style="list-style-type: none"><li>• Co-founded TechLekh, a rapidly growing technology media startup in Nepal, during undergraduate studies</li><li>• Activities include tech media as well as software development services through a sister offshoot</li><li>• Oversaw delivery of large-scale projects including edtech platforms, machine learning products, and web applications</li><li>• Currently one of Nepal's leading tech media properties with a significant following</li><li>• Managed diverse responsibilities such as: setting organizational goals, overseeing managerial tasks, spearheading product development for sister organization</li></ul> <b>Core competencies:</b> Entrepreneurship and Startup Management, Strategic Planning and Goal Setting, Software Development & Engineering, Team Management and Collaboration, Project Leadership and Execution
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## SELECTED PUBLICATIONS (FULL LIST: [GOOGLE SCHOLAR](#) | [DBLP](#) | [ACM DL](#))

ACCEPTED OR PUBLISHED	<ol style="list-style-type: none"><li>1. S Nepal et al., <i>Contextual AI Journaling: Integrating LLM and Time Series Behavioral Sensing Technology to Promote Self-Reflection and Well-being using the MindScape App</i>, <b>ACM CHI EA 2024</b>. Acceptance rate: 34%.</li><li>10. S Nepal, A Pillai et al., <i>Social Isolation and Serious Mental Illness: The Role of Context-Aware Mobile Interventions</i>, <b>IEEE Pervasive Computing Magazine 2024</b>.</li><li>9. S Nepal, A Pillai et al., <i>MoodCapture: Depression Detection using In-the-Wild Smartphone Images</i> <b>ACM CHI 2024</b>. Acceptance rate: 26%.</li><li>8. S Nepal et al., <i>Capturing the College Experience: A Four-Year Mobile Sensing Study of Mental Health, Resilience and Behavior of College Students during the Pandemic</i>, <b>ACM UbiComp 2024</b>. [<a href="#">Released the dataset publicly on Kaggle</a>]</li><li>7. S Nepal et al., <i>Burnout in Cybersecurity Incident Responders: Exploring the Factors that Light the Fire</i>, <b>ACM CSCW 2024</b>.</li><li>6. S Nepal et al., <i>Workplace Rhythm Variability and Emotional Distress in Information Workers</i>, <b>ACM CHI EA 2023</b>. Acceptance rate: 34%.</li><li>5. S Nepal et al., <i>COVID Student Study: A Year in the Life of College Students during the COVID-19 Pandemic Through the Lens of Mobile Phone Sensing</i>, <b>ACM CHI 2022</b>. Acceptance rate: 12.5%.</li><li>4. S Nepal et al., <i>Assessing the Impact of Commuting on Workplace Performance Using Mobile Sensing</i>, <b>IEEE Pervasive Computing Magazine 2021</b>. Impact factor: 3.175.</li><li>3. S Nepal et al., <i>Current practices in mental health sensing</i>, <b>ACM XRDS Magazine 2021</b>.</li><li>2. S Nepal et al., <i>Detecting Job Promotion in Information Workers Using Mobile Sensing</i>, <b>ACM UbiComp 2020</b>. Acceptance rate: 24%.</li><li>1. S Mirjafari et al., <i>Differentiating higher and lower job performers in the workplace using mobile sensing</i>, <b>ACM UbiComp 2019</b>. Acceptance rate: 20%.</li></ol>
IN-PREP OR REVIEW	<ol style="list-style-type: none"><li>3. S Nepal et al., <i>MindScape Study: Integrating LLM and Behavioral Sensing for Personalized AI-Driven Journaling Experiences</i>, Under review at <b>ACM UbiComp 2025</b>.</li><li>2. S Nepal et al., <i>From User Surveys to Telemetry-Driven Agents: Exploring the Potential of Personalized Productivity Solutions</i>, Under review at <b>ACM CSCW 2025</b>.</li><li>1. S Nepal et al., <i>A Survey of Passive Sensing in the Workplace</i>, <b>arXiv 2024</b>.</li></ol>

## VOLUNTEERING & AWARDS

VOLUNTEER	<ul style="list-style-type: none"><li>• Founding Board Member, Better Life Social Organization USA → A 501(c)(3) non-profit organization working for disadvantaged children mainly in Nepal</li><li>• Founding Member, Dartmouth Nepali Students Association → Dartmouth student club for students of Nepali origin</li></ul>
REVIEWER	<ul style="list-style-type: none"><li>• ACM UbiComp 2019, 2021-2024 • ACM CHI 2021, 2024 • ACM CSCW 2021, 2022 • Scientific Reports 2021</li></ul>
AWARDS	<ul style="list-style-type: none"><li>• Special Recognition for Outstanding Review at CSCW 2023 and CHI 2024 (2x)</li><li>• Best Poster Award at Dartmouth Digital Health Summit (2023), Dartmouth College, USA</li><li>• Distinguished Paper Award (2023), ACM UbiComp, Cancún, Mexico</li><li>• Neukom Outstanding Graduate Research Award (2023), Dartmouth College, USA</li><li>• Guarini Travel Award (2023), Guarini School of Graduate and Advanced Studies, Dartmouth College, USA</li><li>• Neukom Travel Grant (2023), Neukom Institute for Computational Science, Dartmouth College, USA</li><li>• Best Paper Honorable Mention (2020), IEEE Pervasive Computing Workshop</li></ul>

## MISCELLANEOUS

TECH SKILLS	<ul style="list-style-type: none"><li>• Python • LLM • Java • JavaScript • Bash Script • Android • Git • Nginx • SQL • MongoDB • PyTorch • R • PHP • Flask • Laravel • Docker • HuggingFace • FastAI • Scikit-learn • AWS • Azure Cloud Storage • REST • Mlxtend</li></ul>
MEDIA	<ul style="list-style-type: none"><li>• <i>Study Tracks Shifts in Student Mental Health During College</i>. Dartmouth News, March 2024.</li><li>• <i>AI App That Can Use Facial Cues to Detect Depressions</i>. The Ross Kaminsky Show (iHeartRadio), March 2024.</li><li>• <i>Pandemic exposed mental health divide among college students, study says</i>. Washington Post, May 2022.</li><li>• <i>Smartphone intervention feasible for Severe Mental Illness</i>. HealthDay, Nov 2021.</li><li>• <i>Wearable tech confirms wear-and-tear of work commute</i>. Dartmouth News, Nov 2021.</li><li>• <i>Rates of anxiety and depression among college students continue to soar, researchers say</i>. Washington Post, June 2021.</li><li>• <i>Coronavirus has made already-stressed college students even more anxious &amp; depressed</i>. Washington Post, July 2020.</li><li>• <i>Researchers developed a sensing system to constantly track the performance of workers</i>. TechCrunch, June 2019.</li></ul>
LANGUAGES	<ul style="list-style-type: none"><li>• English (fluent) • Hindi (fluent) • Nepali (native)</li></ul>
REFERENCES	<ul style="list-style-type: none"><li>• Available upon request.</li></ul>