Shivansh Singh

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Areas of specialisation

Computational Cognitive Science; Machine Learning for Human Behavior; Predictive Analytics; Physiological Data Science; AI Trust Modeling; Ethics in AI; Social Computing

Full Name

Shivansh Singh
Gender: Male
CV Date: 23 June, 2025

Date of Birth, Nationality and Current Residence

Born: March 17, 2002
Nationality: Indian
Current Residence: Finland

Education and Degree Awarded

2025-2027 MASTER OF SCIENCE (TECHNOLOGY) IN SOFTWARE ENGINEERING
Specialization: Digital Systems and Service Development

2022-2025 BACHELOR OF SCIENCE (TECHNOLOGY) IN ELECTRICAL ENGINEERING
Minor: Practical Engineering
Grade: Distinction

Current position

May, 2025- ***Junior Research Assistant, AI and HCI Behavioural Lab***
LUT University, Department of Software Engineering, School of Engineering Science

- Developing machine learning pipelines for physiological data analysis (EEG, eye-tracking, etc.) to predict cognitive load and trust metrics through multivariate modeling

- Implementing predictive algorithms combining quantitative trust measurements, behavioral analytics, and qualitative data mining to assess AI ethics and decision-making patterns

- Building supervised learning models to analyze user interaction datasets and predict trust formation patterns in human-AI systems

- Designing controlled experimental frameworks using statistical analysis and A/B testing methodologies to evaluate environmental variables' impact on behavioral outcomes

May, 2025- ***Researcher & Project Worker, MAISA, Business Finland***
LUT University, Department of Software Engineering, School of Engineering Science

- Leading a €500,000 research team within a €4.9 million Business Finland Co-Innovation project on AI-powered software engineering

- Implementing hybrid intelligence frameworks using machine learning and statistical modeling for software development optimization and performance analytics

- Conducting large-scale data collection and analysis (interviews, surveys, behavioral analytics) with industry partners, processing datasets from Tietoevry, Bittium, and Haltian

- Fine-tuning Large Language Models (LLMs) and developing trustworthy AI applications achieving 90% accuracy through advanced model validation and performance metrics

- Designing data-driven AI collaboration protocols and developing quantitative metrics for measuring generative AI tool integration effectiveness

- Managing international research collaborations and contributing to EU-level AI standardization processes

Previous Work Experience

2023-2025 ***Junior Research Assistant, Information Systems Research Group***
LUT University, Department of Software Engineering, School of Engineering Science

- Led longitudinal analysis studies on AI's behavioral impacts, developing novel statistical methodologies for workplace data collection and predictive modeling

- Designed and validated experimental protocols for measuring AI trust mechanisms, generating frameworks in healthcare and corporate decision-making systems

- Conducted large-scale comparative analysis of human-AI collaborative datasets that influenced evidence-based ethical AI

- Developed novel data science assessment tools for AI-user interaction analysis, resulting in measurable improvements in user adoption prediction models

2022-2023 ***Research Volunteer, SEE School, China & LES, LUT University***
SEE School, HEBUT University & School of Energy Systems, LUT University

- Contributed to interdisciplinary AI applications in healthcare and engineering, including brain tumor detection algorithms and MRI imaging optimization

- Collaborated with multidisciplinary research teams on AI model development and participated in manuscript preparation and review processes

- Conducted systematic literature reviews and performed data analysis to support ongoing research initiatives

- Assisted in research documentation and contributed to conference presentation materials

- Gained experience in cross-cultural research collaboration between Finnish and Chinese academic institutions

Publications

** indicates papers under review*

Journal Articles

2025* Singh, S., & Siemon, D. Trusting the Machine: How Ethical Frameworks Shape Our Faith in AI Decisions. *International Journal of Human-Computer Studies*.

2025 Singh, S. Deep learning-based electricity price forecasting in Finnish Energy Market. *LUT Scientific and Expertise Publications*.

2024 Abd El Kader, I., He, J., Xu, G., Vodolazskii, D., Singh, S., Li, R., & Duan, Y. Innovative Convolutional Neural Network Hybrid for Brain Tumor Segmentation. *WSEAS Transactions on Computers*, 23, 123-134.

Conference Proceedings

2026* Singh, S., & Blomqvist, K. Contextual, Provisional, and Verified: How Professionals Navigate Trust-Control Boundaries with AI. *Proceedings of the 59th Hawaii International Conference on System Sciences*.

2026* Aittamma, E., Siemon, D., & Singh, S. Design Elements for Brand Representation in Conversational Agents. *Proceedings of the 59th Hawaii International Conference on System Sciences*.

2025 Singh, S., & Siemon, D. Emotional Productivity: Exploring the Impact of AI Interactions on Employee Well-Being and Workplace Efficiency. *Proceedings of the 58th Hawaii International Conference on System Sciences*.

2024 Abd El Kader, I., He, J., Wang, Y., Rahman, A M., Vodolazskii, D., Singh, S. Comprehensive Differential and Analysis of Electromagnetic Waves in Biomedical Engineering: Focus on Magnetic Resonance Imaging (MRI).

Peer Review Activities

2025 Reviewer, Hawaii International Conference on System Sciences (HICSS)
2025 Reviewer, International Conference on Information Systems (ICIS)
2025 Reviewer, Americas Conference on Information Systems (AMCIS) - 3 papers
2025 Reviewer, Group Decision and Negotiation - 2 papers
2024 Reviewer, Hawaii International Conference on System Sciences (HICSS)

Presentations

Workshop Presentations

2025 *The AI Dilemma: Enhancing Performance While Preserving Ethics in Academia*
Nordic Workshop on Digital Foundations of Business, Operations, Strategy, and Innovation (DBOSI-25), Lahti, Finland

Awards and Honors

2025 Award for Graduating with Distinction
LUT University

2024 Double-degree Scholarship Recipient (Top 1% in program)
LUT University

2024 3rd place, AI for Accessibility Track
AMD AI Hackathon

2024 LUT Undergraduate Research Grant Award
LUT University

2023 Double-degree Scholarship Recipient (Top 4% in program)
LUT University

2023 1st place, Automation AI Track
Lazy GenAI Hackathon

2023 2nd place, Solutions using IoT Track
Nokia Hackathon

2022 Double-degree Scholarship Recipient (Top 4% in program)
LUT University

2022 1st place, Wacky AI Track
Weird Hacks

Skills and Technical Competencies

Machine Learning & Data Science

Supervised/Unsupervised Learning, Deep Learning, Natural Language Processing (NLP), Predictive Modeling, Statistical Learning, Time Series Analysis, TensorFlow, PyTorch, Scikit-learn

Data Analysis & Statistics

Advanced Statistics, Bayesian Analysis, Experimental Design, Multivariate Analysis, A/B Testing, Python (pandas, numpy, scipy), R Studio, MATLAB, SQL

Programming Languages

Python, R, MATLAB, C#, SQL, C++ (basic)

Research Methodologies

Mixed-methods research, Longitudinal data analysis, Experimental design, Statistical modeling, Survey design and analysis, Behavioral analytics

Specialized Tools & Domains

Physiological data analysis, Human-Computer Interaction analytics, Extended Reality data processing, Unity, Varjo SDK, OpenXR

Languages

Fluent: English, Hindi
Intermediate: Chinese
Beginner: Finnish

References

Available upon request