

Dr. Sambit Praharaj

POSTDOC ON AI IN EdTECH

Updated on 23 Aug 2022

+49xxxxxxx | sambit_praharaj@yahoo.com | linktr.ee/sambitphd | sambit2 | sambitpraharaj

“The greatest danger for most of us is not that our aim is too high and we miss it but that it is too low and we reach it.” — Michelangelo

Research Experience

CAIS and Ruhr University Bochum

Bochum, Germany

Postdoctoral Researcher on AI in EdTech

June 2022 - Present

- Detect quality of collaboration during group work
- Build real-time adaptive feedback to facilitate the collaboration
- Use multimodal learning analytics, collaboration analytics and artificial intelligence

Delft University of Technology

Delft, Netherlands

Visiting researcher as part of PhD research

Oct 2019 - June 2020

- Collaborated in the context of collaborative learning in knowledge building with researchers from TU Delft and National Institute of Education from NTU Singapore

SafePAT Project

Netherlands, Germany, Belgium

Project researcher: Contributed to the project as part of PhD research

May 2018 - Oct 2019

- Improve the (cross-border) Group Handover Training during change of shifts by using sensors and feedback (otherwise known as "Multimodal Learning Analytics during Medical Simulation and Training")

Complex Networking Group, IIT Kharagpur

Kharagpur, India

Research Intern

May 2014 - June 2014

- Performed research on the project titled as: "Measuring Similarity in Undirected, Unweighted Graphs"
- Simplified complex social and telecom networks which evolve with time by designing a combined similarity measure

Education

Open University of the Netherlands

Heerlen, Netherlands

PhD on EdTech (Collaboration Analytics with Multimodal Learning Analytics)

September 2017 - February 2022

- PhD dissertation on "Measuring the Unmeasurable? Towards Automatic Co-located Collaboration Analytics"
- Successfully defended and graduated on 11th March 2022
- Worked with Multimodal Learning Analytics in Co-located Collaboration using sensors to detect different indicators of collaboration quality during a co-located collaboration task and did automatic collaboration analytics
- Collaborated with DIPF Leibniz Institute for Research and Information in Education Frankfurt, Zuyd University and CEL, Delft University

Delft University of Technology

Delft, Netherlands

Msc. in Computer Science

September 2015 - August 2017

- Master's thesis on "Data Analytics in Web-based Education in the Higher-education Classroom"
- Collaborated with Lambda lab in WIS research group at TU Delft and researchers from Lugano, Switzerland for my thesis
- Set up an experiment and analyzed the data gathered from the lecture interaction event logs of around 300 students in each lecture in a Bachelor's classroom to determine the attention level of students with a goal to improve the state-of-the-art classroom teaching

VSSUT Burla

Odisha, India

Bachelor of Technology in Information Technology

2011-2015

- Major Project: Energy Efficient Routing in Wireless Sensor Networks

Research Interests

EdTech, Artificial Intelligence in Education, Data Analytics, Computer Science

- Collaboration Analytics, Multimodal Learning Analytics, Learning Analytics, Technology Enhanced Learning, Natural Language Processing, Educational Data Science, Collaborative Learning, Educational Technology, Artificial Intelligence in Education, Learning Technology, Data Analytics

Publications

Learning Analytics and Knowledge (LAK 22)

California, USA (Online)

S. Praharaj, M. Scheffel, M. Schmitz, M. Specht, H. Drachsler. Towards Collaborative Convergence: Quantifying

March 2022

Collaboration Quality with Automated Co-located Collaboration Analytics

- Designed a dashboard to analyze the quality of collaboration automatically

IEEE Transactions in Learning Technology

Journal

S. Praharaj, M. Scheffel, H. Drachsler, M. Specht. Literature Review on Co-Located Collaboration Modeling

July 2021

Using Multimodal Learning Analytics—Can We Go the Whole Nine Yards?

- Did a Literature Review to detect indicators of collaboration quality, model them in different collaboration scenarios

MDPI Sensors

Journal

S. Praharaj, M. Scheffel, M. Schmitz, M. Specht, H. Drachsler. Towards Automatic Collaboration Analytics for

May 2021

Group Speech Data Using Learning Analytics

- Developed a prototype to do automatic collaboration analytics in a co-located collaboration task

International Conference on Learning Sciences (ICLS 20) ISLS

Nashville, USA

H. Chen, E. Tan, Y. Lee, S. Praharaj, M. Specht and G. Zhao. Developing AI into Explanatory Supporting Models:

June 2020

An Explanation-visualized Deep Learning Prototype for Computer Supported Collaborative Learning

- Assisted in the project with CEL, TU Delft

International Conference on Multimodal Interaction (ICMI 19) ACM

Suzhou, China

S. Praharaj. Co-located Collaboration Analytics

October 2019

- Presented in PhD doctoral consortium with a full scholarship

European Conference on Technology Enhanced Learning (EC-TEL 19) Springer LNCS

Delft, Netherlands

S. Praharaj, M. Scheffel, H. Drachsler and M. Specht. Group Coach for Co-located Collaboration

September 2019

- Showed a demo for the developed tool to give real-time feedback during co-located collaboration

EC-TEL 2018 CEUR

Leeds, UK

S. Praharaj, M. Scheffel, H. Drachsler and M. Specht. MULTIFOCUS: MULTImodal Learning Analytics FOR

September 2018

Co-located Collaboration Understanding and Support

- Wrote PhD research proposal for the doctoral consortium

EC-TEL 2018 Springer LNCS (Track: Innovative Learning Infrastructure)

Leeds, UK

S. Praharaj, M. Scheffel, H. Drachsler and M. Specht. Multimodal Analytics for Real-time Feedback in

September 2018

Co-located Collaboration

- Did a State-of-the-art-survey to detect indicators of collaboration quality and feedback and designed a pilot study to give real-time feedback during PhD meetings

User Modeling, Adaptation and Personalization (UMAP 17) ACM (Track: Technology Enhanced Adaptive Learning)

Bratislava, Slovakia

V. Triglanos, S. Praharaj, C. Pautasso, A. Bozzon and C. Hauff. Measuring Student Behaviour Dynamics in a

July 2017

Large Interactive Classroom Setting

- Analyzed the data captured during all the 15 lectures for the paper which is also a part of my master thesis

DESOSA (Delft Students on Software Architecture)

TU Delft

Chapter on Ember: A framework for creating ambitious web applications

May 2016

- Worked to communicate with the developers on Github, Slack and refactored part of the code on Github, contributed for the chapter

Supervision and Teaching

Master Thesis students and course

Co-supervised and assisted in course implementation

- Co-supervised 2 Master thesis students in the Open University
- Assisted with implementing a new course in Open University digital learning environment (yOULearn)

Other Experience

Co-organized a workshop in CSCL Conference with teams from NIE Singapore, Canada and USA

Lyon, France

Did a live demo in the workshop on Multimodal Learning Analytics in Knowledge Building

June 2019

Organized 2 workshops during Joint Technology Enhanced Learning Summer School

Bari, Italy

One workshop related to my PhD and other was related to balancing PhD life with supervisor

June 2019

- Share my PhD experiences, conference experiences, study and living experience in Netherlands, Europe to help students and professionals, mentor them to study abroad

Review

Editor of conference, reviewer of conferences and journals

- Co-editor of EC-TEL Conference Practitioner Track Proceedings, 2018
- Reviewed for European Conference on Technology-Enhanced Learning (EC-TEL), Learning Analytics and Knowledge (LAK), International Conference on Multimodal Interaction (ICMI), Computer Supported Collaborative Learning (CSCL), Human Factors in Computing Systems (CHI) and Artificial Intelligence in Education (AIED) conferences
- Reviewed for Journal of Computer Assisted Learning (JCAL), IEEE Transactions in Learning Technologies (IEEE TLT), Journal of Learning Analytics (JLA), Education Technology Research and Development (ETRD) and Research Learning and Research Practice (RLRP) journals