Vikram Kamath Cannanure

POSTDOCTORAL FELLOW - SAARLAND UNIVERSITY · HCI, ICTD, AI, EDUCATION

✉ vica001@teams.uni-saarland.de · ⌂ kmarkiv.com · 🔗 vikramkamathc · 🎓 Google Scholar

I am a postdoctoral fellow at Saarland University, focusing on AI to support marginalized communities in the Global South. My research focus is Human-Computer Interaction (HCI) and Information Technology and Development (ICTD). I finished my PhD at Carnegie Mellon University involved designing and deploying a chatbot for teacher professional development in Côte d'Ivoire, impacting over 400 teachers and over 10,000 rural students. Besides my thesis, I have worked on projects in Rwanda, the US, Macau, Afghanistan, Germany, India and South Africa with publications in top tier HCI venues like CHI, COMPASS, ICTD, and PDC. I have secured over $200,000 in grants, including a Gates Foundation award and a fellowship during my PhD. I have co-led *HCI Across Borders*, a community of global researchers withing HCI by conducting workshops at CHI for over 6 years, mentored 25+ students and reviewed 80+ HCI papers.

Research Experience

Saarland University *Saarbrücken, Germany*
PostDoctoral Fellow *October 2023 – present*

- Host: Prof. Ingmar Weber
- Leading a research area at the intersection of HCI and ICTD
- Co-supervising PhD and Master's students on projects in HCI and Generative AI
- 💲 Co-PI on a $100,000 Gates Foundation grant to co-design a youth wellness platform in rural India
- Lead instructor for a seminar course on "AI and the Global South"
- Key publications: [P13, P12, P14, S5]

Education

Carnegie Mellon University *Pittsburgh, USA*
PhD, Human-Computer Interaction *2017– Aug 2023*

- Advised by Prof. Tim Brown and Prof. Amy Ogan
- Committee: Prof. Chinmay Kulkarni, Prof. Mayank Goel, and Prof. Kentaro Toyama (University of Michigan)
- Dissertation: *DIA: Supporting Teacher Professional Development in Low Infrastructure Settings*
- Led multi-year fieldwork and chatbot deployments for teachers in rural Côte d'Ivoire
- 🏆 Awarded $100,000 Fellowship from the Center for Machine Learning and Health (CMLH)
- Key publications: [P6, P7, P8, P9, P10, P15]

Carnegie Mellon University *Pittsburgh, USA*
Masters, Human-Computer Interaction *2017–2021*

Carnegie Mellon University *Pittsburgh, USA*
Masters, Educational Technology and Applied Learning Science *2014–2015*

National Institute of Technology Karnataka *Karnataka, India*
Bachelor of Technology *2007–2011*

Grants ($208K USD) and Awards

2025-	**Gates Foundation, Grand Challenges India (Co-PI)**, *A LLM enabled community centered platform for sexual and mental wellness among youth and women in rural India* (in progress) - **100,000** USD	*India*
2019	**PhD Fellowship**, Center for Machine Learning and Health - **100,000** USD	*Pittsburgh PA*
2023	**SIGCHI Development grant**, HCIxB Workshop at CHI - **8000** USD	
2019	**Best Paper Award**, ACM COMPASS Paper	*Accra, Ghana*
2019	**Poster Spotlight**, ACM COMPASS Poster	*Accra, Ghana*

Selected Publications

Publications appear in top-tier venues in HCI and ICTD, including *CHI*, *ICTD*, and *COMPASS*.
As of 2025: **320 citations**, **h-index: 10** Google Scholar: HVuuUzwAAAAJ ORCID: 0000-0002-0944-7074

[P15] **Cannanure V.K.**, Ngoon T., Wolf S., Jasińska K., Brown T.X., Ogan A. *A Design-Based Research Approach to Bridge Teacher Aspirations and Goal-Setting*. Accepted to *ACM Journal on Computing and Sustainable*

Societies (in press). [Link]

[P14] Zhu J., Kempermann M., **Cannanure V.K.**, Hartland A., Navarrete R., Carteny G., Braun D., Weber I. *Learn, Explore and Reflect by Chatting: Understanding the Value of an LLM-Based Voting Advice Application*. Accepted at *ACM CUI 2025*. [Link]

[P13] Adhikari D.M., Hartland A., Weber I., **Cannanure V.K.**. *Exploring LLMs for Automated Generation and Adaptation of Questionnaires*. Accepted at *ACM CUI 2025*. [Link]

[P12] Behmanush H., Akhtari F., Nooripoor R., Weber I., **Cannanure V.K.** *Online Learning and GenAI: Supporting Women's Aspirations Amid Socio-Political Instability in Afghanistan*. Accepted to *ACM COMPASS 2025*. [Link]

[P11] Verma R., Weber I., **Cannanure V.K.**. *Exploring AI in Education: Child-Computer Interaction in the Global South*. Accepted to *ACM Journal on Computing and Sustainable Societies*. [Link]

[P10] **Cannanure V.K.**, Ngoon T., Wolf S., Jasińska K., Brown T., Ogan A. *Understanding the Longitudinal Impacts of a Chatbot to Facilitate a Virtual Community of Practice for Teachers in Rural Côte d'Ivoire*. *ACM COMPASS 2024*, Delhi, India. [Link]

[P9] Ngoon T., **Cannanure V.K.**, Wolf S., Jasińska K., Brown T., Ogan A. *"I believe I did not preach into the desert": Opportunities & Challenges in Scaling Teacher Mentorship through Mobile Technology in Rural Côte d'Ivoire*. *L@Scale 2024*, Atlanta, USA. [Link]

[P8] **Cannanure V.K.**, Ávila E., Ngoon T., Adji Y., Wolf S., Jasińska K., Brown T., Ogan A. *"We dream of climbing the ladder, for getting there, we have to do our job better": Designing for Teacher Aspirations in Rural Côte d'Ivoire*. *ACM COMPASS 2022*, Seattle, USA. [Link]

[P7] **Cannanure V.K.**, Brown T., Ogan A. *DIA: A Human-AI Hybrid Chatbot for Low-Resource Contexts*. *ICTD 2020*, Guayaquil, Ecuador. [Link]

[P6] **Cannanure V.K.**, Souvenir J., Adji Y., Apke H., Jasińska K., Brown T., Ogan A. *"I'm fine where I am, but I want to do more": Exploring Teacher Aspirations in Rural Côte d'Ivoire*. *ACM COMPASS 2020*, Guayaquil, Ecuador. [Link]

[P5] Madaio M., Yarzebinski E., **Cannanure V.K.**, Zinszer B., Seri A., Tanoh F., Hannon-Cropp J., Cassell J., Jasińska K., Ogan A. *Collective Support and Independent Learning with a Voice-Based Literacy Technology in Rural Communities*. *CHI 2020*, Hawaii, USA. [Link]

[P4] Madaio M., **Cannanure V.K.**, Yarzebinski E., Zasacky S., Tanoh F., Hannon-Cropp J., Cassell J., Jasińska K., Ogan A. *"You Give a Little of Yourself": Family Support for Children's Use of an IVR Literacy System*. *ACM COMPASS 2019*, Accra, Ghana. 🏆 Best Paper Award [Link]

[P3] **Cannanure V.K.**, Brown T. *RASP-IVR: A Low-Cost Interactive Voice Response System*. *AfriCHI 2018*, Windhoek, Namibia. [Link]

[P2] Onafuwa D., Early K., Vyas N., **Cannanure V.K.**, Mankoff J. *Understanding the Information Needs of Prospective Tenants*. *ACM COMPASS 2018*, San Francisco, USA. [Link]

[P1] Bhat K.*, Thinayane M.*, Goldkind L., **Cannanure V.K.** *Critical Participatory Design: Reflections on Engagement and Empowerment in a Case of a Community-Based Organization*. *Participatory Design Conference (PDC 2018)*, Hasselt and Genk, Belgium. [Link]

Book chapters

[B1] Gautam A., Wong-Villacrés M., Gaytán Lugo L.S., **Cannanure V.K.**, Vannini S., Jimenez A., Tuli A., Reynolds-Cuéllar P., Pei L., Alvarado Garcia A., Badillo-Urquiola K., Prietch S.S., Densmore M., Banganayi T., Dray S. *Human-Computer Interaction Across Borders: Perspectives from the Global South*. In *The Human-Computer Interaction Handbook* (4th ed.), Julie A. Jacko (Ed.). CRC Press, 2026.

Work in progress

[W1] Wolf, S., Ogan, A., Jasińska, K., Kembou, S., **Cannanure, V.K.**, Whitehead, H., Corbett, J., Tanoh, F., Wortsman, B., Lim, J., Zhao, H., Kumar, *A. Impacts of Targeted Instruction with Mobile-based Support on Teachers and Students in Rural Côte d'Ivoire.* Submitted to American Educational Research Journal.

Selected Short Papers

[S5] Mensah E.E., **Cannanure V.K.**, Weber I. *Ethnic Diversity and Spatial Dynamics in Google Maps Reviews: Insights from a German Border City. ICWSM 2025* (poster).

[S4] **Cannanure V.K.**, Wolf S., Jasińska K., Brown T.X., Ogan A. *Applying Think-Aloud in ICTD: A Case Study of a Chatbot Use by Teachers in Rural Côte d'Ivoire. ICTD 2024*, Nairobi, Kenya. [arXiv]

[S3] Adhikari D.M., **Cannanure V.K.**, Hartland A., Weber I. *Exploring LLMs for Automated Pre-Testing of Cross-Cultural Surveys. ICTD 2024*, Nairobi, Kenya. [arXiv]

[S2] **Cannanure V.K.**, Behmanush H., Akhtary F., Nooripour R., Weber I. *Exploring the Role of Generative AI in Supporting Women's Aspirations for Learning Programming During Socio-Political Conflict in Afghanistan. ACM COMPASS 2024*, Delhi, India.

[S1] **Cannanure V.K.**, Chen X., Mankoff J. *Twist and Knock: A One-Handed Gesture for Smart Watches. Proceedings of the 42nd Graphics Interface Conference (GI 2016), Victoria, Canada.* [Link]

Selected Workshops and Lightly reviewed work

[L7] Nourian L., Goldenberg Y., Adamu M., **Cannanure V.K.**, Holloway C., Kumar N., Reinecke K., Tigwell G.W. *Challenges and Considerations for Accessibility Research Across Cultures and Regions.* ASSETS '24, Oct, 2024, St. John's, NL, Canada.

[L6] **Cannanure V.K.**, Varghese D., Rivera-Loaiza C., Noor F., Das D., Jain P., Chang-Rizzo M., Wong-Villacres M., Karusala N., Ahmed N., Till S., Akhigbe B., Dray S., Densmore M, Sturm C., Kumar N. (2023). *HCI Across Borders: Towards Global Solidarity.* CHI '23, Apr 2022, Hamburg, Germany.

[L5] **Cannanure V.K.**, Karusala N., Rivera-Loaiza C., Prabhakar A. S., Varanasi R. A., Tuli A., Gamage D., Noor F., Nemer, D., Das D., Dray S., Sturm C., Kumar, N. (2022). *HCI Across Borders: Navigating Shifting Borders at CHI.* CHI '22, Apr 2022, New Orleans, USA.

[L4] **Cannanure V.K.**, Gamage D., Sturm C., Winschiers-Theophilus H., Maestre, J. F., Karusala N., Reynolds-Cuéllar P., Kumar, N., *Workshop: Decolonizing HCI Across Borders.* CHI '21, Apr 2021, Yokohama, Japan.

[L3] Kumar, N, **Cannanure V.K.**, Gamage D. , Prabhakar A., Sturm C. *Workshop: HCI Across Borders and Sustainable Development Goals.* CHI '20, Apr 2020, Hawaii, USA

[L2] Ávila E., Greenholt M. , Adji Y., **Cannanure V.K.**, Brown T., Ogan A. *Designing a Human Centred Chatbot to Mentor Teachers in Developing Contexts:.* AI and Social Good Symposium CMU, Pittsburgh, USA

[L1] **Cannanure V.K.**, Gordon G. *TelKart and QnA: An Open Teaching System for Computer Science Courses.* Open Education Global Conference 2017, (OEC 2017), Cape Town South Africa [Poster]

Teaching Experience

AI and the Global South (Block Seminar)

Lead Instructor   *Summer 2025 (forthcoming)*

Saarland University

Programming Usable Interfaces (05-430/05630)

Teaching Assistant [HYBRID]. Instructor: Scott Hudson   *Spring 2022*

Carnegie Mellon University

User-Centered Research & Evaluation (05-410/05-610)

Teaching Assistant [REMOTE]. Instructor: Raelin Musuraca   *Spring 2021*

Carnegie Mellon University

Elements of Data Science and Artificial Intelligence

Course Coordinator. Instructor: Ingmar Weber   *Fall 2024*

Saarland University

Professional Service

2024	**Lead Organizer**, HCI Across Borders (HCIxB) workshop at ACM COMPASS	*Delhi, India*
2023	**Lead Organizer**, HCI Across Borders (HCIxB) workshop at CHI	*Hamburg, Germany*
2022	**Lead Organizer**, HCI Across Borders (HCIxB) workshop at CHI	*New Orleans, USA*
2021	**Lead Organizer**, HCI Across Borders (HCIxB) workshop at CHI	*Yokohama, Japan*
2020	**Organizer**, HCI Across Borders (HCIxB) symposium at CHI	*Hawaii, USA*
2019	**Organizer**, HCI Across Borders (HCIxB) symposium at CHI	*Glasgow, UK*
2019	**Organizer**, Young Researchers reception ICTDx	*Ahmedabad*
2020-22	**SIGCHI Development Fund**, Executive Committee	
2024	**Programme Commitee**, COMPASS 2025, AFRICHI 2025, ICTD 2024	
2020-	**AC**, CHI (extended abstracts) 2023,2022,2021,2020	
2018-	**Regular Reviewer (over 80 papers reviewed)**, CHI, COMPASS, ICTD, CSCW, CHI case studies	

Mentoring

PhD

*Ethel Mensah: Saarland University, PhD : *Exploring structural inequality in Germany using POI data* (S5)
*Hamayoon Behmanush: Saarland University, PhD : *Supporting Afghan women learn programming* (P2)

Masters

*Divya Mani Adhikari: Saarland University, MS 2025: *Automated Survey Testing using LLMs* (P13, S3)
Prithika Acharya: CMU Pittsburgh, METALS 2022: *Teacher Training Project in Ivory Coast*
Aastha Patel: CMU Pittsburgh, METALS 2022: *Teacher Training Project in Ivory Coast*
Egide Kamuzinzi: CMU Africa, MSIT 2021: *Teacher Training Project in Ivory Coast*
Baptiste Moreau-Pernet: CMU Pittsburgh, METALS 2021: *Teacher Training Project in Ivory Coast*
Saumya Sharma: CMU Pittsburgh, MSIIPM 2020: *Simple Health Information System*
Lucie Uwimpaye: CMU Africa, MSIT 2021: *Simple Health Information System*
Eloísa Ávila: CMU Pittsburgh, MSPPM 2021: *Teacher Training Project in Ivory Coast*
Sheila Mbadi: CMU Africa, MSIT 2021: *Simple Health Information System*
Patrick Manirakiza: CMU Africa, MSECE 2019: *MnE system for Rwanda Women's Network*
Solange Iyubu:CMU Africa, MSECE 2019: *MnE system for Rwanda Women's Network*
Sabin Sheja: CMU Africa, MSECE 2019: *MnE system for Rwanda Women's Network*
Justin Bigwi: CMU Africa, MSECE 2019: *Design of a Phone Call-Based Health Information System*
Gloria Umutesi: CMU Africa, MSECE 2020: *Design of a Phone Call-Based Health Information System*
Jocelyne Mukamisha CMU Africa, MSIT 2020: *Design of a Phone Call-Based Health Information System*
Justin Souvenir Niweteto: CMU Africa, MSIT 2020: *Design of a Phone Call-Based Health Information System*
Fraterne Kagame CMU Africa, MSIT 2020: *Design of a Phone Call-Based Health Information System*
Huguette Ingenere: CMU Africa, MSIT 2020: *French Interview Transcription for teachers in Cote d'Ivoire*
Marie Claudine Ingenere: CMU Africa, MSIT 2020: *French Interview Transcription for teachers in Cote d'Ivoire*
Nebiyou Yismaw: CMU Africa, MSECE 2018: *Digital and Voice based Systems to support GBV*
Fabiola Uwashema: CMU Africa, MSIT 2018: *Digital and Voice based Systems to support GBV*

Undergraduate

*Riti Verma: Indian Institute of Technology, Delhi: *Exploring the role of AI in the Global South* (P11)
Lena Armstrong: University of Pennsylvania, Summer REU: *Teacher Training Project in Ivory Coast*
Maya Greenholt: CMU Pittsburgh, Cognitive Science: *Teacher Training Project in Ivory Coast*

*indicates during my postdoc at Saarland University

Professional Experience

Carnegie Mellon University, Africa

Kigali, Rwanda

VISITING RESEARCHER

Summer - 2018, 2019, Spring 2020

- Host: Prof. Tim Brown
- Project: Design of a Phone Call-Based Health Information System
- Conducted participatory research with rural women and prototyped an IVR system in rural Rwanda

United Nations University Computing and Society

Macau, SAR, China

RESEARCH INTERN

July 2017 – Sept 2017

- Advisor: Dr. Mamello Thinayne
- Conducted participatory design with a local NGO
- Built a mobile app to report and monitor homelessness in Macau

Carnegie Mellon University

Pittsburgh, USA

SENIOR WEB DEVELOPER

July 2015 – June 2017

- Advisor: Prof. Geoff Gordon
- Built and managed educational technology to support online learning
- Prototyping low cost video recording system for teaching courses

Carnegie Mellon University

Pittsburgh, USA

RESEARCH ASSISTANT

Aug. 2015 - June. 2017

- Advisor: Prof. Jen Mankoff
- Longitudinal eating detection: deployed and evaluated the system to 12 users in the field
- Twist n Knock: A one-handed Gesture for smart watches: publication at GI 2016
- EDigs: Built and maintained the APIs for apartment hunting website in Pittsburgh

TeliportMe Inc: Indian startup

Karnataka, IN

WEB ARCHITECT

Jul 2011- Aug 2014

- Engineered APIs for Android, iOS, Web and Google Glass
- Scaled back-end to handle 4 million users and mange 100K locations
- Designed 3D viewer on par with Google street view
- Managed 10 Ubuntu machines with MySQL and Redis replication

Selected Press

The Next Web *TeliportMe introduces 3D effects to its 360-degree panoramic app for Android*
Techcrunch *Test Flighting: Applover Launches Free, Crowdsourced Testing Platform for Android Apps*
Robert Scoble *Developers: crowd-source your testing of Android phones*
CMU *A new online resource from Carnegie Mellon University seeks to help people find the perfect rental*
HCII *EDigs Helps Apartment Hunters Find the Perfect Rental*
TheBetterIndia *How a National Level Cyclist Is Fighting Both Spinal Injury & Poverty with Inspiring Confidence*
Milaap Blog *Getting Back to Cycling: A National Medalist's Dream*

Skills

Programming	Python, PHP, HTML/CSS, JavaScript, Android, Arduino, iOS
Technologies	Pandas, Scikit, Weka, NumPy, AngularJS, Three.js, Bootstrap, MySQL, MongoDB, Redis, WebSockets
Coursework	Applied Fabrication, Applied Machine Learning, Data Pipeline, Gadgets Activity and Recognition in HCI, Education Goals, E-Learning Design Principles, Game Design Studio, Design of Educational Games

Other

- **Philanthropy** Raised over $20,000 for charity for causes in India through swimming and crowd-sourcing
- **Android** I have deployed 3 apps to the app store and have around 10,000 active users
- **Web** I have deployed over 20 websites to production. My best project has reached over 4 million users.
- **Teaching** I taught children a second language (Kannada) at the S.V. Temple in Pittsburgh
- **Swimming** I swam 10 miles from Elephanta Caves to Gateway of India to raise money for acid attack victims