

# Shariff Faleel

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## Technical Skills

### Programming:

python, C#, Javascript, Lisp ●●●●●  
C++, Java ●●●●○

### Platforms:

Unity (AR/VR/Mobile) ●●●●●  
Android ●●●●○

### AI tools:

Data analysis ●●●●●  
Deep Learning (CV, NLP) ●●●●●  
MLops ●●●○●

### Research:

Ideation & planning ●●●●●  
User studies ●●●●●  
Analysis & reporting ●●●●●

### Miscellaneous:

Cloud platforms (aws, gcloud) ●●●○●  
Database (mongodb, firebase) ●●●○●  
Embedded systems ●●●○●

## Soft Skills

Teamwork ●●●●●  
Communication ●●●●●  
Presentation ●●●●●  
Technical writing ●●●●●  
Leadership ●●●●●

## Education

### PhD (Computer Science)

University of British Columbia - Okanagan  
Canada  
2019 - Present  
Supervisor: Prof. Pourang Irani  
GPA: 4.25/4.5

### BSc (Computer Science)

University of Peradeniya  
Sri Lanka  
2019 - Present  
Major: Computer Science  
Minor: Statistics & Mathematics  
GPA: 3.50/4.0 (87%)  
(Second Class Honours - Upper Division)

## Summary:

Primary research interest is in augmenting human cognition. I am particularly interested in using state-of-the-art artificial intelligence technologies with ubiquitous computing to expand the human day-to-day experience.

## Work & Research Experience:

### March 2021 - April 2022

**Associate Researcher, Intern**  
*Huawei Technologies Canada*

- Was part of the Human Machine Interactions lab. Worked on a range of HCI projects.
- Developed research ideas, executed relevant user studies and built demo applications.

### August 2019 - Present

**PhD Student**  
*University of Manitoba*

- Under the supervision of Prof. Pourang Irani
- Exploring AR/VR input and output capabilities.
- Developed Hand Proximate UI as a novel interaction modality for AR/VR.
  - Technologies Explored: Deep learning models (CV), Gesture-based interactions (Leap Motion, Vicon motion tracking, CV), VR/AR (Oculus, Epson & Hololens using Unity, Android & Python)

### July 2017 - August 2019

**Research Assistant**  
*University of Peradeniya*

- Under the supervision of Dr. R.D. Nawarathna.
- Conducted research on deep-learning based computer vision applications as part of a collaboration with codegen international.
- Developed a prototype system for a cashier assistant:
  - Tools/frameworks used: NVIDIA Jetson, Raspberry Pi, Python, pytorch, django, AWS Lambda, AWS Beanstalk, MongoDB.
  - Framework developed for automated ML experimenting, training and deployment.

### March 2017 - June 2017

**Temporary Demonstrator**  
*University of Peradeniya*

- Conducted practical sessions (Programming concepts, Data structures and algorithms, Computer architecture/assembly) for undergraduate students.
- Technical committee member of the Postgraduate Institute of Science Research Congress, 2017.
- Researched Dialogue Management systems.

### August 2016 - January 2016

**Software Engineering Intern**  
*IFS R&D International*

- Developed dependency visualization of system modules. Using Common Lisp, Python, and Javascript.

## Publications:

8 Publication, 2 in-submission. Select publications:

**Shariff AM. Faleel**, Michael Gammon, Kevin Fan, Da-Yuan Huang, Wei Li and Pourang Irani. 2021. "HPUI: Hand Proximate User Interfaces for One-Handed Interactions on Head Mounted Displays," In *IEEE Transactions on Visualization and Computer Graphics*, vol. 27, no. 11, pp. 4215-4225, Nov. 2021,

**Shariff AM. Faleel**, Michael Gammon, Yumiko Sakamoto, Carlo Menon, and Pourang Irani. 2020. "User gesture elicitation of common smartphone tasks for hand proximate user interfaces". In *Proceedings of the 11th Augmented Human International Conference (AH '20)*. Association for Computing Machinery, New York, NY, USA, Article 6, 1-8.

**MF. Ahmed Shariff** and Ruwan D. Nawarathna. 2019. "A Novel Dialogue Manager Model for Spoken Dialogue Systems Based on User Input Learning." In: Hemanth, J., Silva, T., Karunananda, A. (eds) *Artificial Intelligence. SLAAI-ICAI 2018*. Communications in Computer and Information Science, vol 890. Springer, Singapore.