

Ayaskant Panigrahi

I want to create seamless interactions between humans and computers through innovative work in 3D and Extended Reality User Interfaces

Website DevPika.github.io
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Education

Year	Qualification	Institute	GPA
2023	MSc. in Interactive Arts and Technology (Focus: XR research)	Simon Fraser University, BC, Canada	4.13 / 4.33
2020	BTech. in Computer Science and Engineering	Indian Institute of Information Technology, Design and Manufacturing, Jabalpur (IIITDMJ)	8.6 / 10

Work Experience

- EyeJack** (Part-time, May – Jul 2023) **WebXR Developer**
Developed XR interactions for a three.js platform to showcase 3D art across VR, Passthrough and Mobile AR.
- Huawei Technologies** (CloudCG team, Part-time, May – Oct 2022) **Support Researcher**
Worked on various C++ and Python plugins centered around FBX/gITF for Unreal Engine, O3DE and Blender.
- Simon Fraser University** **Teaching Assistant**
 - Interdisciplinary Design Approaches to Computing** (Jan – Apr 2023)
Supporting graduate students from diverse backgrounds to get started with interactive computing.
 - Foundations of Game Design** (Jan – Apr 2022)
Guided undergraduate students in analyzing & designing video/board games by leading workshop sessions.
 - Advanced Game Design** (Sep – Dec 2021)
Supported final year undergraduate students in designing and developing polished games based on industry practices using game engines like Unity, which were judged by a panel of experts at the end of the course.

Relevant Projects

- DAW [n] XR – music sequencer and synth** (2022) **Skills:** VR/ AR Prototyping
Developed a hand-controlled interactive music tracker and synthesizer using WebXR and PlayCanvas
- Animated Shaders** (2022) **Skills:** Shader Programming
Created animated vertex and fragment shaders using Babylon's node-based editor and GLSL
- think outside with boxes** (2022) **Skills:** VR / Desktop Game Development
Created a puzzle game for desktop and XR devices based on constructing a model using projection hints
- Puzzle Editor for Cubism VR** (2021) **Skills:** Unity3D Prototyping
Developed a desktop app to create custom puzzles for the popular block assembling VR game, Cubism VR
- Memento Flori – Imagining Virtual Funerals** (2021) **Skills:** VR UX | Speculative Design
Designed and programmed interactions for a speculative design project on Virtual Funerals of the future
- Fusion – Institute ERP Software** (2019) **Skills:** Django | Git VCS | Software Engg.
Led the development of ERP software, managing contributions using a Forking Git workflow
- JIGREE – Improving Jabalpur tourism sector** (2018) **Skills:** Service Design | Arduino Prototyping
Intervenes at all steps in tourists' journey by providing a central Android app during their stay in Jabalpur

Skills

- Tools and Libraries:** Unity3D, three.js, Unreal Engine, Figma, Shotcut, Adobe Illustrator
- Cross-functional Experience** with Interaction, Service, Speculative and Game Design
- Quantitative and Qualitative Human-Computer Interaction (HCI) **Research**
- Languages:** C#, C++, Java, Kotlin, Python, JS
- Platforms:** PC / Standalone / Mobile XR, Android, Raspberry Pi, Arduino

Research Experience

- **VVISE Lab, Simon Fraser University** **Themes:** VR/AR Interaction Design | Unity3D
Jan 2021 – Dec 2023
Developed VRambrace, a bimanual futuristic 3D system control and text entry technique that presents UI elements on the forearm, under the supervision of Dr. Wolfgang Stuerzlinger. Manuscript under review.
- **Embedded Interaction Lab, IIT Guwahati** **Themes:** VR interaction | Unity3D | Leap Motion
May – Nov 2019
Six-month research internship under Dr. Keyur Sorathia's supervision. Evaluated VR gesture-based selection techniques, also worked on a bespoke hand-held controller to improve accessibility of virtual environments.

Publications

- Shimmila Bhowmick, **Ayaskant Panigrahi**, Pranjal Borah, Pratul Kalita, and Keyur Sorathia. 2020. Investigating the Effectiveness of Locked Dwell Time-based Point and Tap Gesture for Selection of Nail-sized Objects in Dense Virtual Environment. *In Symposium on Spatial User Interaction (ACM SUI '20)*. Article 26, 1–2. DOI: [10.1145/3385959.3422701](https://doi.org/10.1145/3385959.3422701)
- Pranjal Protim Borah, **Ayaskant Panigrahi**, and Keyur Sorathia. 2020. TMOVE: Multimodal Feedback Actuator for Non-visual Exploration of Virtual Lines. *In Proceedings of the Fourteenth International Conference on Tangible, Embedded, and Embodied Interaction (ACM TEI '20)*. 603–610. DOI: [10.1145/3374920.3374994](https://doi.org/10.1145/3374920.3374994)

Leadership Roles and Volunteering

- **Student volunteer** in charge of **event branding** for SIGCHI-sponsored “Expanding the horizons of HCAI”
- **Open-source contributions** to WolvicXR browser, **three.js** and **Unity Experiments Framework (UXF)**
- Member of Vancouver's **VanVR Meetup group**, **regular participant** in events like meetups and hackathons
- Core volunteer in **organising IIITDMJ Dribbble meet**
- Acted as leading member of **IIITDMJ Game Development group**
- Part of 4-member **Project Steering group** leading development of **IIITDMJ ERP software** (Fusion)

Relevant Coursework

- **Augmented, Virtual and Mixed Reality** (Spring '21, SIAT, SFU)
- **Creative Programming for Digital Media & Mobile Apps** (University of London, [online via Coursera](#))
- **3D Interaction Design in Virtual Reality** (University of London, [online via Coursera](#))
- **Human-Centered Design: An Introduction** (UCSD, [online via Coursera](#))
- **Computer Vision with Deep Learning** (Spring '20, IIITDMJ)

Test Scores

- **GRE General Test:** 332/340 (Quantitative – 168, Verbal – 164, Analytical Writing – 4)
- **TOEFL:** 108/120 (Reading – 28, Listening – 30, Speaking – 23, Writing – 27)

Awards and Achievements

- **FCAT Graduate Fellowship** valued at **3500 CAD**, SIAT, SFU **2022**
- **Entrance Graduate Fellowship** valued at **7000 CAD**, SIAT, SFU **2021**
- **IIITDMJ Proficiency Prize** for the **best project** in the graduating batch **2020**
- **Institute topper** in **NCAT 2019** First round with a **nationwide percentile of 99.2** **2019**
- Selected for the **prestigious Kishore Vaigyanik Protsahan Yojana (KVPY) Fellowship** **2015**
- Awarded **Scholarship** under **National Talent Search (NTS) Scheme** **2012 - 2020**