

Ayaskant Panigrahi

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

DevPika.github.io ↗

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Experience

- Green Forest XR** ↗ (Feb 2024, ongoing) **Lead XR Developer**
Leading all facets of development, focused on edutainment Mixed Reality apps like **Mars Rovin'** ↗
- EyeJack** ↗ (Part-time, May – Jul 2023) **WebXR Developer**
Developed an interactive three.js platform to showcase 3D art across VR, Passthrough and Mobile AR.
- Huawei** (Computer Graphics Support team, Part-time, May – Oct 2022) **Support Researcher**
Worked on C++ and Python plugins centered around FBX/gITF for Unreal Engine, O3DE and Blender.
- Simon Fraser University** (2021 – 2023)
VRbrace, a bimanual futuristic XR user interface technique created using Unity3D for Varjo XR-3. Presents UI elements on the forearm. Supervised by **Dr. Wolfgang Stuerzlinger** ↗.
Interdisciplinary Design Approaches to Computing
Supported graduate students from diverse backgrounds to get started with interactive computing using p5js.
Foundations of Game Design
Led workshop sessions in analyzing & designing video/board games for undergraduate students.
Advanced Game Design
Supported final year undergraduate students in designing and developing polished games based on industry practices using game engines like Unity, which were judged by experts from the industry.
- Embedded Interaction Lab**, IIT Guwahati (May – Nov 2019)
Six-month research internship under Dr. Keyur Sorathia's supervision. Evaluated **VR gesture-based** ↗ selection techniques using Unity3D, Leap Motion and Oculus Rift.

Education

Year	Qualification	Institute	GPA
2023	MSc. Computer Science + HCI (Focus: XR Interaction research)	Simon Fraser University, Vancouver, Canada	4.13 / 4.33
2020	BTech. Computer Science and Engineering	Indian Institute of Information Technology, Design and Manufacturing, Jabalpur (IIIT-DMJ)	8.6 / 10

Relevant Projects

- Mars Rovin'** ↗ (2024) **Skills:** VR / AR | Unity3D | C#
Drive around Mars in this mixed reality STEAM edtech app, released on the **Meta App Lab**
- DELTA REAL/ation: Empowering Migrant Futures** ↗ (2024) **Skills:** VR / AR | Unity3D | C#
Developed at the **MIT Reality Hack '24** hackathon in Boston using Unity3D, for Meta Quest 3 paired with Looking Glass
- Feature for Wolvic - Open-source XR browser** ↗ (2023) **Skills:** VR / AR | Android
Contributed a developer feature, making Wolvic the only XR browser to support local addon installation
- AR Portal Shooting Game** ↗ (2023) **Skills:** VR / AR | WebXR
Developed at the Meta + AWS WebXR hackathon in Seattle using three.js and Svelte for Meta Quest 3
- DAW [n] XR – music sequencer and synth** ↗ (2022) **Skills:** VR / AR | WebXR
Developed a hand-controlled interactive music tracker and synthesizer using WebXR and PlayCanvas
- think outside with boxes** ↗ (2022) **Skills:** VR / Web Game Dev
Created a puzzle game for desktop / XR devices based on constructing a model using projection hints
- Puzzle Editor for Cubism VR** ↗ (2021) **Skills:** VR Modding | Unity3D
Developed a Unity3D desktop app to create custom puzzles for the popular block assembling VR game, Cubism
- Memento Flori – Imagining Virtual Funerals** ↗ (2021) **Skills:** UX for VR | Speculative Design
Designed and programmed interactions for a speculative design project on Virtual Funerals of the future

Skills

- **Platforms:** Meta Quest 3/Pro/2, Varjo XR-3, Tilt Five, Looking Glass, Leap Motion hand tracking, Oculus Rift, HTC Vive, Smartphone AR / VR on Android, Raspberry Pi, Arduino
- **XR API / SDK:** OpenXR, SteamVR, WebXR, Google Cardboard, ARCore
- **Tools and Libraries:** Unity3D, three.js, Unreal Engine, Figma, Shotcut, Adobe Illustrator
- **Languages:** C#, JavaScript, Python, C++, Kotlin, Java

Leadership Roles, Volunteering and Events

- Leading XR development and publishing efforts at **Green Forest XR**, with expo booth at **AWE XR USA'24** in **Los Angeles**
- **Open-source contributions** [↗](#) - **WolvicXR** browser, **three.js** and **Unity Experiments Framework (UXF)**
- **Volunteer** in charge of **event branding** [↗](#) for SIGCHI-sponsored “**Expanding the horizons of HCAI**”
- Member of Vancouver’s **VanVR Meetup group**, **regular participant** [↗](#) in 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)

Publications

- **Ayaskant Panigrahi**, Aunnoy Mutasim, Wolfgang Stuerzlinger. VRambrace: Combining Passive Haptics and Proprioception for VR System Control and Text Entry on the User’s Forearm. Manuscript.
- Shimmila Bhowmick, **Ayaskant Panigrahi**, Pranjal Borah, Pratul Kalita, and Keyur Sorathia. Investigating the Effectiveness of Locked Dwell Time-based Point and Tap Gesture for Selection of Nail-sized Objects in Dense Virtual Environment. ACM SUI 2020. [10.1145/3385959.3422701](#) [↗](#)
- Pranjal Protim Borah, **Ayaskant Panigrahi**, and Keyur Sorathia. TMOVE: Multimodal Feedback Actuator for Non-visual Exploration of Virtual Lines. ACM TEI 2020. [10.1145/3374920.3374994](#) [↗](#)

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