

Amrit Amar

- Technical contributor who loves learning about and solving challenging problems.
- Passionate about building software that helps people solve real problems in their lives.
- Drawn to systems-level problems involving cross-functional collaboration across several disciplines.
- Thrives in high-ambiguity situations and enjoys early-stage design and development.

Work Experience

Data Engineer

Inflexion Games

📅 April 2023 – Current

A part of the Analytics Game Services team to design and maintain data pipelines for a live-service game called Nightingale.

- Worked in Unreal Engine 5 with C++ to support batch and real-time telemetry pipelines on both clients and dedicated servers.
- Used Google Cloud technologies along to set up telemetry endpoints, cloud-run services, and Dataflow pipelines.
- Performed Analytics reporting from BigQuery tables into reports during playtests with over 10,000 participants.
- Collaborated with several gameplay teams to overhaul and incorporate data into their systems to improve the game design process.

Software Engineer

Meta

📅 August 2020 – January 2023

Worked as part of the Reality Lab's Surreal research team on an AR device, Project Aria, for contextualized AI and live mapping research.

- Designed and developed several key features such as telemetry, provisioning (managed and released over 3000 devices), audio, app-device communication, device streaming over Wi-Fi, and multi-sensor time-domain synchronization.
- Maintained a custom Android (AOSP) codebase working with native C++ and Java services and wrote Python and Bash scripts for testing various aspects of the device.
- Worked cross-functionally with product designers and managers, operation teams, and data scientists to resolve device bugs and tickets from users.

Student Researcher

Cornell University, Cornell Graphics and Vision Group

📅 October 2019 – June 2020

Worked with Professor Steve Marschner and Professor Bruce Walter on "Exploring photo-realistic material rendering in VR" as my Master of Engineering final project.

Contact Info

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Skills

C++ • Java • Python • C#/.Net • JavaScript • Jupyter • Bash • Unix/Linux • GitHub • Unity Game Engine • AOSP • SQL

Computer Graphics and Shaders • Data Science • AR/VR Design • Artificial Intelligence • Bio-inspired computing Machine Learning • Game Design • Robotics • 3D Modelling • Technical Writing • Teaching and Mentoring

Education

Master of Engineering (M.Eng.),
Computer Science

Cornell University

📅 August 2019 – May 2020

Bachelor of Science (B.S.),
Computer Science

Cornell University

📅 August 2016 – December 2019

- Used Unity and GLSL to implement the ellipsoid shading model, a more realistic model than the standard shading models present in graphics applications, particularly with anisotropic surfaces.
- Built an interactive VR environment and tested the shading model by comparing the look of various materials in VR to their real-life counterparts under different lighting conditions.

Software Engineer Intern

Facebook

📅 May 2019 – August 2019

Joined the Facebook Video Livestreaming team.

- Implemented MPEG-DASH ingested live video feed for livestreaming using a combination of C++, Java, and Python to improve reliability for live streaming in 3rd-world/developing countries.
- Created an end-to-end working prototype that allows the user to go live from the FBLite app.

Software Engineer Intern

LiveLike

📅 May 2018 – August 2018

Worked on creating AR sport viewing experiences.

- Worked with Unity and ARKit/ARCore to create augmented reality sports viewing experiences for mobile devices.
- Devised ways to show live data and statistics in augmented reality for a major global racing sporting organization.
- Designed and implemented a gamification social platform with friends, chat rooms, and mini games.

Robotics Software Engineer

Cornell University, Robotics Personal Assistants Group

📅 April 2017 – January 2018

- Worked with Professor Ross A. Knepper's research group on creating a Solar-Powered Autonomous Blimp capable of independent flight for extended periods of time.
- Developed higher-level planning algorithms, UI design, and designed communication nodes using ROS.

Augmented Reality Developer

Beyond One

📅 July 2017 – October 2017

- Participated in a VR Summer Bootcamp hosted by DIVR Edu, a startup from Beyond One that creates educational content to teach students in schools.
- Designed VR/AR projects and developed CurioPets, a multiplayer "Pokémon Go + Tamagotchi in AR" iOS game using ARKit.

Awards

- Top Achiever Scholar from Botswana.
- Cornell Computer Science Student Recognition Award for my work at the *Association of Computer Science Undergraduates* (ACM Chapter), 2019.
- Most Innovative Game at the Cornell Games Showcase for *OutOfSync*, 2018.
- Won the "Best Game Programmer in Africa" competitions, 2013 and 2014.
- IT Innovation Award at the *Botho College ICT Linkz Challenge*, 2013.