Arsh Khokhar

arshkhokhar10@gmail.com • 204.698.7089
Github:// arsh-khokhar • LinkedIn:// arsh-khokhar

EDUCATION

UNIVERSITY OF MANITOBA | Bachelor of Computer Science Hons. Co-op — Jan 2017 - May 2021

Concentrations: Web-based Systems, Artificial Intelligence, Computer Graphics and HCI

Cumulative GPA: 4.01 / 4.50 • Dean's Honour List: Fall 2020, Winter 2021

EXPERIENCE

UBISOFT | Software Developer — Winnipeg, MB

Co-op Work Term III — Jun 2020 - Aug 2020

Tech stack: C++, HLSL, Git, Perforce

- Developed and maintained features in the Rendering and Animation pipeline of proprietary game engine for upcoming AAA titles.
- Researched and implemented new algorithms for realistic and scalable real-time Physically-based animations.
- Migrated prototype features with essential extensions and refactoring to the pipeline, making them production-ready.

ELECTRONIC ARTS | Software Developer — Vancouver, BC

Co-op Work Term II — Sep 2020 - Dec 2020

Tech stack: C++, C#, .NET, WPF, Perforce

- Designed and developed tools to improve the animation authoring workflows in EA's proprietary game engine Frostbite.
- Collaborated with the UX team for designing intuitive editor UIs for the artists and animators.
- Obtained regular feedback from the animators of games such as FIFA and Madden to ensure high user satisfaction of the deliverables.

UBISOFT | Software Developer — Winnipeg, MB

Co-op Work Term I — Jan 2019 - Apr 2019

Tech stack: Python, OpenCV, Tensorflow, OpenGL, Qt, Docker, ZeroMQ, Git

- Designed and developed Machine Learning based tools for expediting the terrain-authoring workflows in proprietary game engines.
- Built specialized UIs and Renderers for modularity and multi-engine support of the tools developed.
- Deployed trained ML models on internal clusters; added network support to the tools for multi-client usages.

SKILLS

Languages: C/C++ • C# • Python • Java • JavaScript • HLSL • GLSL • LaTeX

Technologies: Flask • NodeJS • ExpressJS • ReactJS • PostgreSQL • MongoDB • .NET • OpenGL • AWS • Git

PROJECTS

THE CNN PROBLEM AND ITS VARIANTS | Research Project — arshkhokhar.com/cnn_survey.pdf

- A survey paper highlighting techical results and online algorithms for the Orthogonal and Continous CNN problem variants of the Generalized *k*-server problem.

REAL-TIME RAYTRACER | JavaScript, WebGL, GLSL

- A GPU based real-time ray tracer based on the Phong Shading model that includes lighting details such as reflections, refractions, transmissions and soft shadows.

TASKBOARD | ReactJS, NodeJS, ExpressJS, PostgreSQL, Heroku

- A full-stack web app with a card/list based UI to improve productivity and collaboration on projects.