

ARDA TEMEL

Software Intern

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EDUCATION

Honors BSc Computer Science

York University 01/2019 - Ongoing GPA **3.8** / 4.0

- Course Work in Computer graphics, simulation and animation.
- Math and stats chair honor roll

EXPERIENCE

Software Engineer Intern C++/C#

OssKin 2022 - Ongoing Montréal, Canada

3D modeling software that aims to mass customize 3D orthotics to specific patients' anatomies

- Major contributions to the architectural structure of the code base and implementation of key features using both C++ and C#.
- Practiced scrum methodology delivering multiple presentations on the state of the project.
- Worked on Mesh preparation and loading from 3D scans to real-time application.
- Model and customize the orthotics using mathematical representations such as curves, splines, surfaces, and meshes
- Write efficient and clean code using guidelines provided by the team lead.
- Implemented unit tests for critical operations in the system.

Mixed Reality Developer Intern

BMS Labs 09/2020 - 09/2021 Enschede, Netherlands

The BMS lab provides a wide range of technical services for application development.

- Developed and Designed XR applications that are used and published as research projects
- Wrote gameplay logic (autonomous agents, crowd control, object interaction) using Object-oriented design principles.
- Built tools using C# and .Net for non-developers to contribute in development process increasing overall productivity
- Created features to automate certain tasks that are used across multiple projects
- Created object serialization methods that are used across multiple projects to save/load states
- Developed custom stylized shaders to decrease project size and load times significantly

Software Intern

Ravico Analatycs Inc. 05/2020 - 09/2020 Toronto

Laboratory Informatics planning systems.

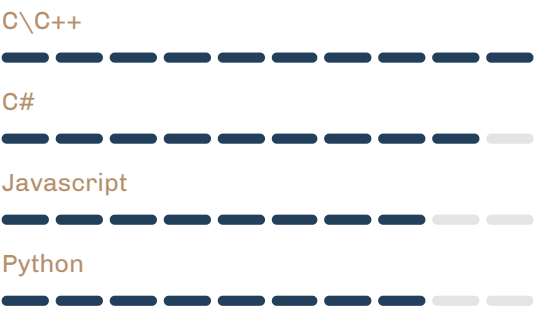
- Practiced Agile Methodology to develop a complex software system in a progressive manner.
- Designed UI using Adobe XD and implemented in React.js.
- Developed and Maintained serverless web-app using AWS cloud functions.
- Built tools for data serialization using Python and Javascript.
- Constructed data models using MySQL, which are used in the database.
- Collaborated with other developers using git.

SKILLS

Toolbox

Unity	Unreal Engine 5	MySQL	OpenGL/WebGL	.NET	
XR Development	Figma	Linux	GLSL/HLSL	React.js	Git
Github/Gitlab	AdobeXD	3D Math	Jira	Rhino	Svelte

PROGRAMMING LANGUAGES



PROJECTS

Inverse Kinematics

York University Toronto, ON

Real-time IK simulator for a humanoid character - OpenGL, C++

- Fully functional real-time IK solver using pseudo-inverse matrix
- Final Grade A+

3D Spring Mass Simulation

York University Toronto, ON

Spring mass system simulation in C++ capable of multiple integration models.

- Real-time collision detection and resolve collisions via penalty systems using springs
- Euler, symplectic, and verlet integration for update
- Can simulate 1000+ particles and springs.

Using a Virtual Reality House-Search Task to Measure Trust During Human-Agent Interaction

University of Twente, Bms Lab/Netherlands

<https://tinyurl.com/44cf4htd>

VR Research on Human and AI Agent interaction

- Immersive VR application with intense feelings of risk and betrayal for testing trust on AI agents and gather data from user input.

Using Virtual Reality to Improve Subjective Vitality

University of Twente, Bms Lab/Netherlands

<https://essay.utwente.nl/89140/>

Immersive VR Research

- The study focused on the design, development, and usability of a virtual reality (VR) nature experience to improve subjective vitality of university students.

Mirror Therapy in Virtual Reality by a Brain-Computer Interface

University of Twente, Bms Lab/Netherlands

<https://essay.utwente.nl/87423/>

VR research with EEG integration

- Develop and evaluate a Virtual Reality (VR) system, used for rehabilitation through Mirror Therapy, that is inclusive for people experiencing Phantom Limb Pain after amputation.
- Real time data streaming through LSL