

# IAN LOCHHEAD

## SPATIAL DATA SCIENTIST | XR RESEARCHER | UNITY DEVELOPER

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### SUMMARY

Relentless and passionate innovator with 10+ years of experience advancing 3D spatial reality capture and geographic visualization technologies across research, industry, and non-profit sectors. Expert in designing and optimizing 3D visualization workflows that enhance decision-making, operational efficiency, and data clarity in complex environments. Collaborative and analytical thinker with a proven ability to deliver creative, technically sound solutions tailored to the needs of diverse stakeholders in technology-driven fields.

### SKILLS

- Unity, Unreal Engine, Blender
- C#, Python, WebGL, WebXR
- ArcGIS, QGIS
- 3D GIS & Spatial Data Visualization
- AR/VR Development & Prototyping
- Spatial Data Analysis & Modeling
- Cross-Functional Collaboration
- Project Management
- Presentations & Stakeholder Engagement

### WORK EXPERIENCE

#### CHIEF TECHNOLOGY OFFICER | UNITY DEVELOPER & DESIGNER

FASHION INNOVATION CENTRE

2023 - PRESENT

VANCOUVER, BC

- Developed 3D visualization interfaces for the apparel industry, including virtual try-ons, showrooms, and design tools
- Collaborated with industry professionals to integrate sustainability standards into apparel design workflows

#### UNITY DEVELOPER | 3D VISUALIZATION SPECIALIST

CONSULTANT

2022 - PRESENT

DELTA, BC

- Provided strategic guidance for the design and development of advanced 3D visualization interfaces
- Developed interactive 3D visualizations for web, desktop, mobile, and headset-based environments (e.g. Meta Quest, Apple Vision Pro, and HoloLens) using Unity

#### AR/VR INNOVATION CONSULTANT | PRIMARY DEVELOPER & DESIGNER

HAZARDSCAPE

2021 - 2022

VANCOUVER, BC

- Advised on immersive visual analytics solutions for disaster and emergency management professionals
- Designed and developed Unity-based VR prototypes for Meta Quest to support high-stakes decision making

#### RESEARCHER | SPATIAL INTERFACE RESEARCH LAB

SIMON FRASER UNIVERSITY

2015 - 2022

BURNABY, BC

- Collaborated on virtual and augmented reality research and prototyping with academic, industry, and non-profit partners
- Designed and developed advanced analytical spatial data visualizations and simulations for PC and AR/VR platforms
- Contributed to research reports and academic journal manuscripts

#### LAB INSTRUCTOR

SIMON FRASER UNIVERSITY

2015-2022

BURNABY, BC

- Designed and delivered GIS, 3D visualization, and AR/VR development instructional materials, presentations, and labs
- Mentored 100+ students on GIS, 3D spatial data science, and visual analytics

## AR/VR DEVELOPER & DESIGNER

SIMON FRASER UNIVERSITY

2019-2020

BURNABY, BC

- Collaborated with multidisciplinary experts from SFU and the Museum of Vancouver to explore the potential of XR in education and stakeholder engagement
- Designed and developed a suite of innovative XR-based exhibits merging real and virtual spaces for experiential education

## PROJECT EXPERIENCE

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### GRADUATE RESEARCH

SIMON FRASER UNIVERSITY

2015 - 2022

BURNABY, BC

- Conducted research in 3D GIScience, including spatial data capture workflows, data quality, visualization, human factors, heuristics, and emerging interface technologies
- Analyzed research data, synthesized findings, and delivered clear, impactful presentations
- Led research projects and authored eight peer-reviewed, first-author publications

### MITACS

OCEAN WISE CONSERVATION ASSOCIATION

2017 - 2019

VANCOUVER, BC

- Developed an innovative underwater photogrammetry workflow for 3D surveys of glass sponge morphology
- Designed and executed experiments to evaluate workflow performance and establish data quality benchmarks
- Created XR interface prototypes to explore immersive, interactive approaches to 3D data analysis in marine ecology

## EDUCATION

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### DOCTOR OF PHILOSOPHY | FACULTY OF ENVIRONMENT | 3D GEOGRAPHIC INFORMATION SCIENCE

SIMON FRASER UNIVERSITY

2017-2022

BURNABY, BC

Thesis: Establishing an evidence-based foundation for the integration of emerging geospatial technology in 3D GIScience

- NSERC Post Graduate Scholarship – Doctoral

### MASTER OF SCIENCE | FACULTY OF ENVIRONMENT | 3D GEOGRAPHIC INFORMATION SCIENCE

SIMON FRASER UNIVERSITY

2015-2017

BURNABY, BC

Thesis: Generating 3D data, simulations, and geovisual interfaces for 21st century risk assessment and communication in multilevel space

### BACHELOR OF ARTS | FACULTY OF ENVIRONMENT | GEOGRAPHY | SPATIAL INFORMATION SYSTEMS

SIMON FRASER UNIVERSITY

2013-2015

BURNABY, BC

President's and Dean's Honour Roll

### DIPLOMA | MARKETING & SALES MANAGEMENT | SAUDER SCHOOL OF BUSINESS

UBC SAUDER SCHOOL OF BUSINESS

2008-2011

VANCOUVER, BC

Top Academic Student, 2010

## CERTIFICATIONS

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- Google Project Management | 2023 | Coursera
- Product-Led Certification | 2023 | Pendo