Tim Straubinger

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timstr.github.io

PERSONAL

Citizenship: **Canadian** Languages: **English, German** Pronouns: **he, him, his**

EDUCATION

MSc., Computer Science – University of British Columbia (Sept 2019 – Nov 2021)
Supervised by Robert Xiao, PhD and Helge Rhodin, PhD

BSc., Computer Science – University of British Columbia (Sept 2014 – May 2019)
Graduated with distinction – Dean's Honour List, 2017 Winter Session

WORK EXPERIENCE

Full-time Software Developer – Vital Mechanics Research Inc (May – Aug 2018, Jan – Aug 2019)

- Designed and implemented a cloud-based framework for creating and persisting digital assets for use in simulation-driven product design
- Migrated a C++ code base (150k+ LOC) and continuous integration system to modern C++
- Created a user interface for creating, reviewing, and testing physical cloth materials for use in interactive physical simulation

Undergraduate Research Assistant – University of British Columbia
(Jan – April 2018, Sep – Dec 2018)

- Developed an end-to-end pipeline for streaming animated mesh geometry over a network for interactive level-of-detail rendering

TEACHING EXPERIENCE

Teaching Assistant – University of British Columbia

- **Video Game Programming** - CPSC 427, Spring and Fall 2021
  Gave several lectures to 70+ students on Modern C++ and Rigid Body Dynamics
- **Machine Learning and Signal Processing** – CPSC 554X, Fall 2020
- **Advanced Software Engineering** – CPSC 410, Summer 2020
- **Introduction to Software Engineering** – CPSC 310, Fall 2019
  Gave several lectures to 100+ students on software design principles and course technologies
- **Models of Computation** – CPSC 121, Fall 2017

RESEARCH INTERESTS

- **Machine Learning**
- **Physically Based Rendering**
- **Geometry Processing**
- **Computer Vision**
- **Physical Simulation**
- **Computational Imaging**

SKILLS

Programming Languages

- **C++** – 9 years of experience
- **Python** – 2 years of experience
- **Rust** – 2 years of experience
- **TypeScript** – 4 years of experience

Frameworks and Libraries

- PyTorch, React.js, Boost, CUDA

Tools and Environments

- Git, Visual Studio, VS Code, CMake, Conan, AWS, Node.js, Docker, ROS

PROJECTS

Please visit timstr.github.io for a detailed and up-to-date list of academic and personal projects