SILVER BURLA

location: Calgary, AB, CA | **phone:** +1 778 223 0018 | **email:** silverburla@gmail.com

website: silverburla.com | **github**.com/5ilv3r6url4 | **linkedin**.com/in/silverburla

WORK HISTORY

CANNAMETRICS – VANCOUVER, BC
LEAD ENGINEER   08.2022 – 04.2023

Skills: HTML, CSS, JavaScript, Excel, C#, ASP.NET, Entity Framework, SQL, T-SQL, LINQ, SSMS, Git, Microsoft Azure, Microsoft Azure SQL Database, Azure DevOps Services, Visual Studio, Bitbucket, Asana, Angular, Technical Writing, Microservices, REST, CQRS, Component Architecture, Layered Architecture, Client-Server Model

- Stepped in subsequent to major layoffs, replacing the development team and CTO.
- Created product roadmaps, wrote reports, and collaborated closely with the owners, data science team, customer service team, and product designer as the sole engineer.
- Identified and resolved critical platform issues, significantly reduced client churn, improved product knowledge, managed development cycles, servers, databases, and DevOps optimizations, improved documentation and code quality, fixed legacy bugs, developed new features, improved old features, created internal tools, hired and trained developers, and managed third party solutions and communications.
- Reduced monthly database costs by over $6,000.00.
- Major features developed include: data visualization client service aggregating over 1 million points of data, automated email client service for business data summary reports, new customization options for business and product platform pages, improved web scraping, and integration of third-party machine learning data processing.

THE UNIVERSITY OF BRITISH COLUMBIA – VANCOUVER, BC
DEPARTMENT OF COMPUTER SCIENCE – DIGITAL GEOMETRY PROCESSING GROUP
RESEARCH ASSISTANT   05.2016 – 12.2020

Skills: Python, HTML, CSS, JavaScript, Node.js, Express.js, PugJS, C++, Bash, Git, SVN, Visual Studio, Qt, Qt Creator, MySQL, MATLAB, GLSL, OpenGL, Photoshop, Illustrator, Premiere, PowerPoint, Audacity, Blender, Inkscape, GIMP, Final Cut Pro

- Curated diverse datasets including pixel art, vector sketches, and 3D models.
- Recruited users and artists for research studies.
- Produced comparative method results and figures for research papers.
- Handled video and audio content for conference submissions.
- Wrote scripts in a supporting role for research.

GRADUATE TEACHING ASSISTANT   09.2018 – 08.2020

CPSC 427: Video Game Programming CPSC 430: Computers and Society
CPSC 210: Software Construction   CPSC 121: Models of Computation

Skills: Algorithm Design, Argumentation and Logic, Writing, OOP, MVC, ECS, HCI, Excel, PowerPoint, Python, Java, JavaScript, C++, GLSL, OpenGL

- Conducted office hours, led labs, and graded student work across various courses.
- In CPSC 427:
  - Designed lecture slides for the HCI and ECS modules.
  - Developed tools for cross-play evaluations and grade disputes.
  - Created a custom Excel gradebook with an accompanying Python script for efficient grade management which became integral to the course.
- In CPSC 430: independently organized and supervised extracurricular activities to encourage student participation, as well as final review sessions.
- Consistently received top scores in student feedback evaluations.

SENIOR TEACHING ASSISTANT   01.2016 – 04.2020
CPSC 314: Computer Graphics ~120 students
Skills: Python, HTML, JavaScript, GLSL, WebGL, PHP, Excel, PowerPoint, Bitbucket, Trello
- Initially oversaw lab sections and office hours, later supervising teaching assistants in teams of six.
- Managed course logistics, including training teaching assistants.
- Organized meetings, scheduled, assigned, and managed tasks, performed quality control of assignments and grading, and resolved grade disputes.
- Created tools and workflows for task scheduling, grading, record-keeping, and dispute resolution, some of which became integral parts of the course.
- I received an award in 2019 for my work.

PUBLICATIONS

C. Araujo, N. Vining, **S. Burla,** *M. Ruivo de Oliveira, E. Rosales, A. Sheffer*. **Slippage-Preserving Reshaping of Human-Made 3D Content**. *SIGGRAPH Asia 2023*, to appear, https://www.cs.ubc.ca/labs/imager/tr/2023/3DReshaping/

PROJECTS

menuVis: a Recipe Creation Visualization Tool for Chefs   12.2019
Technologies: C++, Qt, Info Viz
https://www.silverburla.com/content/projects/paper_menuvis.pdf
CPSC 547: Information Visualization term project. Cost-benefit analysis tool for chefs, scrapes ingredient prices from suppliers to visualize trends and risks over time.

Foci: a Novel Cognitive-Training Smartphone App   12.2018
Technologies: Java, MySQL, HCI
https://silverburla.com/content/projects/paper_foci.pdf
CPSC 544: Human Computer Interaction term project. Cognitive training android app for students, visualizes progress and incrementally increasing duration of focus training.

EDUCATION

THE UNIVERSITY OF BRITISH COLUMBIA – VANCOUVER, BC
MASTER OF SCIENCE, Computer Science, Computer Graphics   09.2018 – 05.2021
Thesis: Improved Normal Estimation from Cross-Section Drawings
Supervisor: Alla Sheffer
Link: https://dx.doi.org/10.14288/1.0395345
Surface normal estimation algorithm for product designers to generate 3D surface data from 2D vector stroke sketches. Perceptual rules are translated into a constrained minimization problem using the NLopt library's Method of Moving Asymptotes for fast numerical optimizations. Complex graph operations are supported using the Boost Graph Library. Accompanied by a GUI created with Qt, adhering to strict design principles.

THE UNIVERSITY OF BRITISH COLUMBIA – VANCOUVER, BC
BACHELOR OF FINE ARTS, Visual Arts and Computer Science   09.2013 – 12.2018
Double Major

References available upon request.