DEREK REPSCH

SOFTWARE ENGINEER – EMBEDDED UI / 3D GFX – C++

derekrepsch@gmail.com
206.351.9222 | linkedin.com/in/drepsch

MS in Electrical Engineering	University of Washington Seattle	August 2022
BS in Mechanical Engineering	University of Washington Seattle	June 2020
BFA in Digital Arts & New Media	School of the Art Institute of Chicago	June 2011

GRADUATE COURSEWORK

Physically Based Rendering | GPU Programming for Scientific Visualization | Embedded SW for Real-Time Systems | Autonomous Vehicle Sensors and Control | AI / ML in Healthcare | Computer Vision

GRADUATE RESEARCH

3D Graphics / Desktop Application Engineer – C++ **UW ECE Internal Tool** Mar 2022 – Aug 2022

Developed novel application for 3D data manipulation and physically based rendering using Qt GUI Framework. Features include real-time GLSL shader programming, GPU-compute interface, and integrated OpenGL debugger. Deployed to research team as frontend to advanced ray-tracing solver.

WORK EXPERIENCE

PACCAR Embedded Engineering — Kirkland, WA

Application Software Engineer – C++ **Global Digital Display SW** Backend — May 2022 – Current

Developed production features bridging vehicle hardware to Kanzi UI. Lead process improvement project towards ASPICE certification. Introduced automation in Azure DevOps PR review and documentation using Clang and Doxygen. Provided training and published internal reference materials. Authored style guide and implementation templates, with best practices supported by optimization studies. Administrated SW Requirements and Architecture in IBM Rational / DNG.

Kenworth Truck Company — Kirkland, WA

Mechanical Design Engineer **Zero Emissions Vehicle** Outerbody — Aug 2021 – May 2022

Designed fairing assembly for upcoming T680E Class 8 BEV, utilizing Six Sigma methodology. Introduced advanced CAD / PLM techniques to manage and exchange project data, improve Class-A Surface handling, leverage simulation in early design stages and automate assembly interfaces. Provided training materials and documentation for the aforementioned.

Associate Design Engineer **New Product Development** Hood Team — Nov 2020 – Aug 2021

Supported T680 Next Gen launch. Initiated cost-reduction redesign with projected savings $2M / year.

UWashington Formula Motorsports — Seattle, WA

Design Lead / Project Manager **Boeing Sponsored Capstone** — Winter 2020

Developed repeatable method for 3D printed titanium components including proof-of-concept design.

Czinger Vehicles / Divergent Technologies — Torrance, CA

Structures Engineering Intern **Suspension Systems** Structures Team — Summer 2019

Completed simulation driven redesign of 3D printed subsystem for hyper-class hybrid vehicle.

Derek Repsch : Works | OpenGL Dev Tool | CT Scan Data Vis | Kenworth Digital Dash | Czinger 21C Components