Alnis Smidchens

contact@alnis.dev | alnis.dev | 206.548.6900 | /in/alnis-smidchens | YouTube | GitHub/AlnisS | itch/alnis

Experience

Senior Innovation Engineer — **PTC, Corporate Strategy** — **July 2024 to present**
- End-to-end creation of new technologies and products for PLM, ALM, visualization, and collaboration
- Solving "unknown unknowns" for ambiguous, open-ended technical and business problems
- Connecting and extending Codebeamer, Windchill, Nvidia Omniverse, and Onshape
- Full-stack web, data, graphics, UX, server, DevOps, and tooling development (Go, Java, HTML5, Lit)

Physics Researcher — **NQMR, UW Physics Dept.** — **June 2021 to June 2024**
- Physics engine & graphics for real-time conductor simulation & field visualization (VR, GLSL)
- Full stack design, development, and deployment of responsive Progressive Web App (Godot, Netlify)
- Successful launch of simulation product used by 100s of students in UW introductory physics series

President — **Game Dev Club at UW** — **June 2023 to June 2024**
- Organizing club meetings, educational presentations, activities, and game jams
- Leading administrative team to define club's direction, web/social presence, and recruiting strategy
- Passion for game development, specializing in 3D & physics-based games (see GitHub and Itch)
- Vice President since September 2022, **member since February 2021**

President — **Husky Satellite Lab at UW** — **June 2022 to June 2024**
- Leading organization and execution of CubeSat satellite mission to Low-Earth Orbit (HuskySat-2)
- Managing 90+ students across engineering & business disciplines, leading 10-person admin team
- Coordinating finances, external relationships, branding, communications, and day-to-day operations
- Lead of mechanical R&D June 2021–2022, **member since October 2020**

Chief Technology Officer — **Underwater ROV at UW** — **June 2022 to June 2024**
- Leading design & engineering of underwater robot to compete in MATE robotics championship
- Coordinating all aspects of design & team (mechanical, electrical, software) to work harmoniously
- Best documentation in 2023, published in the Journal of Ocean Technology
- Placed 2nd internationally of 20 teams in upper division in summer 2022 MATE championship
- Lead of mechanical R&D June 2021–2022, **member since October 2020**

Product Management Intern — **PTC Onshape** — **June to Dec 2021; June 2022 to Dec 2023**
- Research & Development for Head of Product & CTO (prototypes, demos, exploration, etc.)
- Software for customers: user research, full-stack development, operations, support
- Marketing for product: blog posts, marketing website design & content, video creation
- Product research & definition: customer collaboration, feature prioritization, roadmap development
- Reports for leadership: security, customer requests, competitive analysis, internal velocity

Teaching Assistant — **ME 123, UW Mechanical Engineering Dept.** — **March 2021 to June 2021**
- Grading and feedback for student CAD & drafting work based on ANSI & ASME standards
- Documentation and tutorials for various experience levels (PDM & SolidWorks CAD)

Skills

Computer-Aided Design: Onshape Professional, SolidWorks Associate, Speed CAD Champion; KiCAD EDA, Autodesk Inventor, SimScale CFD & FEA, Blender product visualization

Software Development: web front-end (JS/TS, CSS, HTML, Lit); web server development (Go, Java); DevOps (Linux+Bash, Netlify, Cloudflare); graphics & interaction (Processing, Godot/GDScript, Python)

Miscellaneous Technologies & Skills: agile hardware development, full-stack web development, application security, software prototyping, data visualization, systems engineering, webmaster

Languages: fluent English and Latvian, basic Japanese

Education

Applied Physics (EM focus) — **University of Washington** — **September 2020 to June 2024**
- 3.92 GPA, departmental honors, aerospace engineering senior capstone (as a physics junior)
- Courses in comp. sci., physics, math, oceanography, aerospace & mechanical eng., int'l law & policy

High School Diploma — **Garfield High School** — **September 2016 to June 2020**
- 4.00 GPA, 11 AP courses, FIRST robotics interdisciplinary team lead (best design award)
- Mentored in agile software by ex-Amazon developer, lead trumpet in nationally acclaimed Jazz Band