

# Peyton S. Nielsen

Compass Consulting Engineers P.C.  
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## EDUCATION

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### **University of Washington** – Seattle, Washington

- B.S. Mechanical Engineering, 2015 – 2017

### **Highline College** – Des Moines, Washington

- A.S. Pre-Engineering, 2013 – 2015

## ACCREDITATIONS

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- Crash Data Retrieval (CDR) Certified Download Technician – May 2024

## PROFESSIONAL EXPERIENCE

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### **Compass Consulting Engineers P.C.** – Westminster, Colorado

Accident Reconstruction Engineer, 2023 – Present

- Perform investigation, reconstruction and analysis of motor vehicle accidents, including automobiles, heavy vehicles, bicycles, and pedestrian impacts
  - Perform scene and vehicle inspections to collect three-dimensional geometry and physical evidence using surveys, three-dimensional scans and drone footage
  - Create three-dimensional point clouds of damaged vehicles and crash sites using FARO Scene, ReCap and Pix4D
  - Utilize PhotoModeler software to perform photogrammetry to reconstruct destroyed physical evidence and damaged vehicle geometry
  - Simulate motor vehicle accidents using HVE software and simulation models such as EDCRASH, EDSMAC, SIMON
  - Create two- and three-dimensional drawings using the computer-aided design software AutoCAD
  - Mathematical analysis of motor vehicle accidents
  - Prepare technical reports and exhibits for litigation

### **The Shock Howse** – Burien, Washington

Mountain Bike Suspension Service Apprentice, 2022

- Disassembly, service, and reassembly of shocks and suspension forks. Mainly focused on Fox and Rockshox.
- Custom tunes and setting adjustments are used to improve rider experience depending on the customer's needs.

### **Fluid Motion, LLC** – Arlington, Washington

Production Engineer, 2019 – 2022

- Facilitate and manage production and assembly of 11 different models of fiberglass boats, particularly focusing on house-made supplementary materials such as wood, plastics, and structural support materials.
  - Update supply shops' layouts, inventory systems, and processes; including design of all physical infrastructure.

- Creation of an inexpensive and effective method to digitize physical part patterns for CNC routing, material nesting, and a digital archive.
- Evaluation and testing of new materials for integrity, machinability, and aesthetics. Integration of approved materials.
- Provide purchasing department with ordering schedules for production support.

**Heli-Cal Products (MW Industries) – Santa Maria, California**

Product Design Engineer, 2018 - 2019

- Design, test, and lifecycle analysis of machined springs, flexible couplings, and u-joints for high precision applications.
  - Direct customer contact regarding design and technical support for all Heli-Cal products.
  - Lead programmer and operator for Starrett CMM automated measuring device.

**Personal Mechanic Work, 2011 – Present**

- Personal as well as friends and family work on cars, motorcycles, and bicycles.
  - Includes regular maintenance, body work, and diagnostics, as well as repair of suspension and steering, cooling, ignition, fuel, drive train, interior, and sound components.

**Holiday Parks, Inc – Tukwila, Washington**

HVAC Engineering Intern, 2016

- Design of HVAC systems in large scale buildings.
  - Close work with Project Engineers, Project Managers, and CAD designers, as well as Permit and Service departments.
  - Various plumbing and HVAC TI projects and on-site analysis of outdated or soon to be installed systems.

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ADDITIONAL EXPERIENCE

**Aquatic Research Drone – Seattle, Washington**

Capstone Project at The University of Washington, 2017

- Design and manufacturing of SWATH aquatic research drone with deployable data collection pod in group of 5 senior mechanical engineering students.
- Primarily responsible for hull design, including resistance, stability, and hydrodynamic analyses to ensure best prototype design.

**Volunteer Expert Witness – Denver, Colorado**

Colorado Defense Lawyers Association Mock Trial, 2024

- Expert Witness volunteer to be examined and cross-examined by Colorado lawyers in a mock trial scenario.

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PROFESSIONAL AFFILIATIONS

- American Society of Mechanical Engineers (ASME)
- Society of Women Engineers (SWE)
- National Association of Professional Accident Reconstruction Specialists (NAPARS)