

# Peyton S. Nielsen

Compass Consulting Engineers P.C.  
10875 Dover St., Suite 900  
Westminster, CO 80021  
720.458.9190  
[peyton@compassengineer.com](mailto:peyton@compassengineer.com)

## EDUCATION

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

- Bachelor of Science Mechanical Engineering, 2017

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

- Associates of Science Pre- Engineering, 2015

## 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 including EDCRASH, EDSMAC4, and SIMON.
  - Create two- and three-dimensional drawings using AutoCAD computer-aided design software.
  - Mathematical analysis of motor vehicle accidents.
  - Prepare draft technical reports and trial exhibits for clients.
  - Analysis of vehicle components including passenger vehicles and bicycles.

### **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 brand components.
- Custom tune and adjust settings 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 in-house supplementary materials such as wood, plastics, and structural support materials.
  - Update supply shops' layouts, inventory system, and processes including design of all physical infrastructure.
  - Creation of an inexpensive, effective method to digitize physical part patterns for CNC routing, material nesting, and digital archive of the patterns.
  - Evaluation and testing of new materials for integrity, machinability, and aesthetics. Subsequent integration of approved materials.
  - Provide purchasing department with production ordering schedules.

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

Product Design Engineer, 2018 - 2019

- Design, test, and lifecycle analysis of machined springs, flexible couplings, and universal joints for high precision applications.
  - Direct customer point of 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

- Ongoing work on cars, motorcycles, and bicycles for family, friends, and self.
  - Includes regular maintenance, body work, diagnostics, repair of suspension and steering, cooling, ignition, fuel, drive train, brakes, interior damage repair, and installation of sound components.

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

HVAC Engineering Intern, 2016

- Design of HVAC systems in large scale buildings.
  - Worked closely with Project Engineers, Project Managers, CAD designers, and the Permit and Service departments.
  - Involved in various plumbing and HVAC tenant improvement projects.
  - Onsite analysis of outdated systems or new installations of same.

ADDITIONAL EXPERIENCE

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**Aquatic Research Drone** – Seattle, Washington

Capstone Project at The University of Washington, 2017

- Part of 5-member team to design and manufacture a SWATH aquatic research drone with deployable data collection pod.
- Primarily responsible for hull design, including resistance, stability, and hydrodynamic analyses to ensure best prototype design.

PROFESSIONAL AFFILIATIONS

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- Licensed FAA Part 107 Commercial Drone Remote Pilot - 2023
- American Society of Mechanical Engineers (ASME)
- Society of Women Engineers (SWE)
- National Association of Professional Accident Reconstruction Specialists (NAPARS)