

Michael Shires

michael@mshires.net

mshires.net

github.com/MichaelShires

Work Experience

Sea-Returnee Off-Crew (SROC) Instructor, Coordinator, NPTU – Charleston, SC May 2023 – Present

- Naval Nuclear Power Training Unit
- Teach all incoming prospective staff instructors on:
 - * Nuclear chemistry control.
 - * Casualty Response.
- Coordinate the SROC Training Program administratively.
- Over 80 Instructors qualified at or before Naval Reactors date.

Crew Leading Engineering Laboratory Technician (ELT), NPTU – Charleston, SC Jan 2022 – May 2023

- Lead a division of 6-9 ELT Staff Instructors in maintaining chemistry control and radiological requirements.
- Oversee the training and graduation of:
 - * ~24 ELT's per year.
 - * ~300 other prospective operators per year.

Leading ELT, USS Indiana (SSN 789) – Groton, CT Nov 2020 – Dec 2021

- Led a division of 4-7 technicians.
- Directly responsible for ensuring safe operations of reactor plant chemistry control
- Manager for Fast Attack Submarine radiological controls casualty response program.

ELT, USS Indiana (SSN 789) – Norfolk VA / Groton CT Dec 2018 – Nov 2020

- Working-level technician performing chemical and radiochemical analysis
- Interpret and brief results to supervisors
- Operate a submarine reactor plant safely and effectively.

Projects

pathFinder github.com/MichaelShires/pathFinder

- Recursive implementation of Djisktra's Algorithm for shortest path.
- Drive a robot powered by an RPi to follow magnetic strips in industrial settings.
- Signal filtering and resolving for real-world applications.

chemSolver github.com/MichaelShires/chemSolver

- Final project for Microprocessors course.
- chemical reaction parser and balancer in MIPS32 assembly.
- Generated linear algebra and matrix math library for solving.

Skills

Qualifications: Leading ELT, Training Coordinator, Engineering Watch Supervisor (EWS)

Skills: Project Management, Casualty Response, Chemical and Radiochemical Analysis.

Languages: C/C++, Python, Java, MIPS32, VHDL

Education

Pennsylvania State University – B.S. in Software Engineering, GPA: 3.9

June 2021 – June 2025