Carl Kolon

carlkolon.com | [email] | [/in/carl-kolon/](http://linkedin.com/in/carl-kolon/) | [phone number] | github.com/cckolon

---

I am a software engineer with ocean and nuclear experience. Before I started my current job, I spent 5 years leading engineering teams aboard nuclear submarines. I have a coding background from my academic work and independent projects. At the Naval Academy, I was a Trident Scholar in Mathematics.

EDUCATION

US Naval Academy – B.S. with Distinction, Mathematics with Honors   (Jun 2014 – May 2018)
3.89 GPA, [Trident Scholar](#), [Julian Clancy Frazier Mathematics Research Award](#).

SKILLS

Significant Experience In: Python, Tensorflow ([certified](#)), C#, HTML, CSS, JavaScript, Wolfram Mathematica, Linux/Unix Shell, LaTeX, AWS (ECS/EKS), Kubernetes.
Some Experience In: Liquid (Jekyll), C++, R, Gusek, Ruby, QGIS, Temporal.
Language Skills: Proficient in Mandarin (Speaking), lived in Beijing for 9 years.

EXPERIENCE

Software Engineer: Vannevar Labs   (Jun 2023 – Present)
- Contribute to a backend library which ingests and parses thousands of documents per day.
- Designed and created internal tools which automate security analysis of websites, saving hours per-engineer-per-day.
- Redesigned thirty web scrapers to eliminate a dependency on an unstable PDF library. These were previously too difficult to convert.

Submarine Officer: PCU New Jersey/USS John Warner   (Jan 2020 – May 2023)
- Acting ship's engineer, in charge of 62 nuclear trained sailors and $1 billion of equipment.
- [Submarine Squadron Eight Junior Officer of the Year](#) for 2022. Selected as the best officer from about 80 peers.
- Subject matter expert on the Navy's newest submarine reactor plant (Type II S9G). Top of my class at [PNEO](#), the Navy's final examination for nuclear officers.
- Wrote scripts to integrate the ship's fire control software with GIS tools, saving 500 man-hours of chartlet preparation.

Officer Student: Nuclear Power/Submarine Training Pipeline   (Jul 2018 – Dec 2019)
- Widely recognized as the [most academically challenging program](#) in the military. Split between classroom instruction and practical experience leading a watch team on a real reactor plant.

PROJECTS ([See my blog for more](#))

Seeing Underwater with Neural Networks ([On My Website](#) – [Slides](#))   (Apr 2023 – Aug 2023)
Originally presented at X in June. A project to automatically perform Target Motion Analysis (TMA) with recurrent neural networks. Outperforms current methods by 5-6 times. Python, Tensorflow, Mathematica.

Torpedo Evasion! (On My Website [[1]](#) [[2]](#) [[3]](#) – [On Github](#))   (Feb 2021 – Dec 2021)
A physics-based submarine combat computer game. Unity, C#, Blender.

Trident Scholarship ([On My Website](#) – [Preprint](#) – [Video Presentation](#))   (Mar 2017 – May 2018)
Studied an applied mathematics problem concerning the stability of swarm models. Mathematica, C++, ROS, LaTeX, Python, Linux Shell. 1 paper under peer review.

PERSONAL

My wife, Jackie, is a resident doctor of internal medicine at UCSF.
In my spare time I enjoy backcountry skiing, ultralight backpacking, guitar, and running with [SFRRC](#).