Nathaniel Phillips

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Education

- **Webb Institute** — Long Island, NY
  Dual Bachelor of Science - Naval Architecture & Marine Engineering; GPA: 3.52 — *August 2019 - June 2023*
  Courses: *Thesis, Ship Design II, Engineering Economics, Ship Dynamics, Ship Propulsion Systems, Ethics*
- **RL Turner High School** — Carrollton, TX
  High School Diploma; GPA: 4.0 — *August 2014 - June 2019*
  Overview: *Graduated valedictorian, Sophomore gap year to pursue Chinese studies in Taiwan. Active in swimming, diving, & tennis.*

Skills Summary

- **Languages**: C++, C#, C, Python, Java, VBA, Verilog, IronPython, CUDA
- **Frameworks**: .NET, Angular
- **Tools**: Docker, GIT, MySQL, WPF, OpenGL
- **Platforms**: Linux, Windows, Arduino, Raspberry, FPGA
- **Soft Skills**: Leadership, Event Management, Problem-solving, Time Management

Experience

- **Herbert ABS Software Solutions** — Alameda, CA
  Software Engineering Intern — *May 2022 - September 2022*
  - **Genetic Algorithm Optimization**: Co-created genetic algorithm library (NGSA-II) which optimizes ship tank and cargo distribution in C#.
  - **Python Scripting**: Ported VB6 scripts to Python 2.7. The scripts test ship alarms and Auto-Ballast systems.
  - **Data Plotting**: Used C# library (Oxyplot) to plot power curves and optimal ship data.
- **BAE Systems** — Norfolk, VA
  Software Engineering Intern — *January 2022 - February 2022*
  - **Ship Data-sheet Merger**: Python project that parsed data from three different sources and combined all the data into one excel sheet.
  - **CPI System**: Used Excel to create a CPI analysis visualization through the use of pivot tables and Microsoft PowerBI.
  - **Scheduling**: Performed ship scheduling system overhaul to incorporate new data points and enable faster system run-times.
- **Vigor Industrial** — Seattle, WA
  Project Management Intern — *July 2021 - August 2021*
  - **Schedule Conflict Manager**: Used VBA to create a program that filtered schedule data based on tags and showed all schedule conflicts between ship superintendents.
  - **Ship Progress Audit**: Used the diagrams for the Guided Missile Cruiser, to progress electrical systems aboard.
  - **Superintendent Shadowing**: Performed scheduling on the Littoral Combat Ship, including welding, painting, installs and removals based on current contracts.
- **Metal Shark Boats** — Rijeka, Croatia
  Engineering Intern — *January 2021 - March 2021*
  - **Scantling Calculations**: Performed scantling calculations for small craft as per ABS regulations and generated the frames for the vessel in AutoCAD.
  - **FEA**: Performed FEA on different ship systems including fire monitors, hand rails, and engines as per ABS regulations.
  - **Rhino**: Started initial Rhino design for a 100m sailboat from AutoCAD design.

Projects

- **Collision Avoidance on Autonomous Vessels (Reinforcement Learning through Unity)**: (Thesis work in progress) Research oriented, open source, search engine for bringing reverse multimedia search to small & mid scale enterprises. Tech: Unity, TensorFlow, Python, C & C++. (August '22)
- **School Store Kiosk**: C# based form that lets the user select themselves and checkout different foods drinks which gets automatically reflected in the treasury database. Tech: C++, C# with WPF & SQL. (July '22)
- **School Voting System**: Automated waterfall voting system for school elections which is still in use today. Tech: C++, C# with WPF & SQL. (October '2020)
- **Crypto Mining Automation**: Automated program that resets different rigs based on input from HiveOS API using micro-controllers and C++. (April '2021)

Honors and Awards

- Eagle Scout - October, 2018
- SNAME Ship Design Competition (2nd) - August, 2022
- College Deans List - June, 2022
- High School Valedictorian - June, 2019