

# Eric Crisp

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CONTACT INFORMATION	<div><a href="mailto:ecrisp@upenn.edu">ecrisp@upenn.edu</a> (302) 528-2477</div> <div><a href="https://ericmcrisp.github.io/pages">ericmcrisp.github.io/pages</a> <a href="https://linkedin.com/in/ecrisp">linkedin.com/in/ecrisp</a></div>		
EDUCATION	<b>University of Pennsylvania</b> , Philadelphia, PA <b>M.Sc., Data Science</b>		Jan 2025 - Dec 2025
	<b>Pennsylvania State University</b> , State College, PA <b>M.Sc., Mechanical Engineering</b> <b>B.Sc., Aerospace Engineering</b>		Aug 2015 - May 2021
TECHNICAL SKILLS	<b>Programming</b> Python, C++, MATLAB JavaScript	<b>Data, AI/ML</b> TensorFlow, PyTorch, Scikit-learn SQL, Spark, Pandas, Numpy	<b>Tools &amp; DevOps</b> Docker, AWS, CI Git, React, Node.js
SUMMARY	I aim to successfully transition into a role related to ethical AI development after several rewarding years in the aerospace field. With years of industry experience culminating as a Lead Engineer, I have developed significant engineering, analytical, leadership, and communication skills and experience that blend well with the skills and knowledge in AI/ML, software development and data science developed at the University of Pennsylvania.		
EXPERIENCE	<b>Lead Aerospace Engineer, Real-Time Modeling</b> <b>Blue Origin, Seattle, WA</b> <ul style="list-style-type: none"><li>• Led a small, multi-disciplined team responsible for all RTM (real-time model) activities across Blue Origin.</li><li>• Developed RTMs for use in HIL, test support, controller development, and requirements validation.</li><li>• Served as RTM project manager from project conception by managing scope, deliverables, and delegation.</li><li>• Identified critical software bugs on flight HIL systems via RTM integration, increasing reliability and value.</li><li>• Reduced testing manpower requirements by up to 35% with RTM, accelerating development timelines.</li><li>• Effectively communicated the value and impact of technical outcomes from RTM to both technical and non-technical stakeholders.</li><li>• Architected the RTM framework and developed source code, tooling, supporting algorithms and solvers.</li></ul>		Apr 2022 – Nov 2024
	<b>Propulsion Development Engineer, Combustion Devices</b> <b>Firefly Aerospace, Austin, TX</b> <ul style="list-style-type: none"><li>• Developed an automated thermal-structural design process that reduced engine production costs by 12%.</li><li>• Contributed to clean sheet engine design through production, exceeding performance requirements by 4%.</li><li>• Conducted root cause investigations of failures and implemented systematic and engineering solutions.</li><li>• Enhanced engine test visibility with automated visualizations of the engine state relative to test sequence.</li></ul>		May 2021 – Apr 2022
PERSONAL PROJECTS	<b>Physics Informed Neural Networks - Learning the Conservation Equations</b> Jun 2025 – Present <ul style="list-style-type: none"><li>• Developing neural networks to automatically generate simulation code for simple physics problems.</li><li>• Creating evaluation framework to identify failure modes where AI-generated simulations violate conservation laws (energy, mass, momentum), providing insights into model limitations in scientific domains.</li><li>• Implementing hybrid neural-symbolic approaches combining Physics-Informed Neural Networks (PINNs) with code generation models to assess AI capabilities in automated scientific computing and numerical method selection.</li></ul> <b>Full Stack Web Development with NLP</b> May 2025 – Jul 2025 <ul style="list-style-type: none"><li>• Built a full-stack application using AWS RDS, React, Node.js, and NLP to help users identify restaurants in their city, discover similar options, and receive personalized meal and restaurant suggestions.</li><li>• Developed a full-stack web application integrating a Spotify dataset hosted on an RDS instance, leveraging the React API and Node.js for backend functionality.</li></ul>		
OTHER ACTIVITIES AND AWARDS	<b>Blue Origin Engines Challenge Award</b> Awarded for technical successes in developing the real-time modeling capabilities at Blue Origin.		Jul 2022
	<b>Blue Origin Liftoff Award</b> Nominated by peers and team members for leadership, technical excellence, and having a bias for action.		Jan 2023