

Eric Crisp

CONTACT INFORMATION	<div>ecrisp@upenn.edu (302) 528-2477</div> <div>ericmcrisp.github.io/pages linkedin.com/in/ecrisp</div>		
EDUCATION	University of Pennsylvania , Philadelphia, PA M.Sc., Data Science		Jan 2025 - Dec 2025
	Pennsylvania State University , State College, PA M.Sc., Mechanical Engineering B.Sc., Aerospace Engineering		Aug 2015 - May 2021
TECHNICAL SKILLS	Programming Python, C++, MATLAB JavaScript	Data Science, AI/ML TensorFlow, PyTorch, Scikit-learn SQL, Spark, Pandas, Numpy	Tools & DevOps Docker, AWS, CI Git, React, Node
SUMMARY	I am looking to transition into a role related to AI development. I am grateful to have had many opportunities throughout my career to develop engineering, communication, analytical skills along with leadership experience that blend well with the foundational AI/ML skills and knowledge developed at the Penn.		
EXPERIENCE	Lead Aerospace Engineer, Real-Time Modeling Blue Origin, Seattle, WA <ul style="list-style-type: none">• Led a small, multi-disciplined team responsible for all RTM (real-time model) activities across Blue Origin.• Developed RTMs for use in HIL, test support, controller development, and requirements validation including trade studies and performance optimization.• Served as RTM project manager from project conception by managing scope, deliverables, and delegation.• Identified critical software bugs on flight HIL systems via RTM integration, increasing reliability and value.• Reduced testing manpower requirements by up to 35% with RTM, accelerating development timelines.• Effectively communicated the value and impact of technical outcomes from RTM to both technical and non-technical stakeholders.• Architected the RTM framework and developed source code, tooling, supporting algorithms and solvers.		Apr 2022 – Nov 2024
	Propulsion Development Engineer, Combustion Devices Firefly Aerospace, Austin, TX <ul style="list-style-type: none">• Developed an automated thermal-structural design process that reduced engine production costs by 12%.• Contributed to clean sheet engine design through production, exceeding performance requirements by 4%.• Conducted root cause investigations of failures and implemented systematic and engineering solutions.• Enhanced engine test visibility with automated visualizations of the engine state relative to test sequence.		May 2021 – Apr 2022
PERSONAL AND ACADEMIC PROJECTS	Fundamental Physics Models from Physics Informed Neural Networks <ul style="list-style-type: none">• Investigating neural-symbolic approaches that combine Physics-Informed Neural Networks (PINNs) with transformer-based code generation models to model physical situations.• Developing neural networks to automatically generate simulation code for simple physics problems, leveraging deep learning to bridge theoretical physics with computational implementation.• Creating evaluation framework to identify where AI-generated simulations violate fundamental conservation laws (energy, mass, momentum), providing insights into model limitations in implementing within scientific computing domains. Machine Learning Pipeline for Food Classification and Health Scoring <ul style="list-style-type: none">• Built an end-to-end ML pipeline to classify food items and generate health scores using supervised learning algorithms, with model optimization through GridSearchCV hyperparameter tuning achieving 91% accuracy on test data.• Implemented comprehensive data preprocessing using Pandas for large-scale dataset manipulation, NLP techniques for ingredient text processing and nutritional analysis, normalization, imputing, and encoding for PCA analysis and created visualizations with Seaborn and Matplotlib to present process results.		Jul 2025 – Present May 2025 – Jul 2025
AWARDS AND ACTIVITIES	Blue Origin Engines Challenge Award Awarded for technical successes in developing the real-time modeling capabilities at Blue Origin.		Jul 2022