Kaia Burgos

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EDUCATION

University of Washington, College of Engineering **Seattle, WA**
B.S. Electrical and Computer Engineering, Minor: Data Science Sep 2021 - June 2025
GPA: 3.77, *Dean's List, NSF REU Grant Awardee, AFEW Scholar*
Relevant Coursework: Embedded Systems • Digital/RTL Design • Signals & Systems • Data Structures and Algorithms • Circuit Theory • Neural Networks/Deep Learning • Statistics • Embedded Machine Learning • Intro to Neuroscience

SKILLS

Programming: Python, Java, JavaScript, SystemVerilog, C/C++, MATLAB, SQL; **Tools:** Git, Linux, AWS, CI/CD, GCC
Software: Pytorch, Tensorflow/Tensorflow Lite, Pandas, Scikit-Learn, Timm, ROS, OpenCV, Figma
Hardware/Embedded: FPGA, RTL Design, RTOS, I2C/SPI/UART/CAN, KiCAD, Quartus Prime/Modelsim, LTSpice

EXPERIENCE

Boeing | AI/ML Software Engineering Intern June 2024 – Present
- Contributing to ground-up development of an internal toolkit aiming to standardize and simplify enterprise AI solutions by developing the product's first testing suite and inference capabilities in deep learning models
- Increased testing coverage by 30%, by writing automated CI tests to validate the performance of 160+ scikit-learn models, testing for seamless module integration and parameter performance
- Proposed dockerization of Gitlab CI runner images, reducing CI pipeline runtime by 75%

UW Formula Motorsports (FSAE) | Driverless Software Engineer Aug 2023— Present
- Collaboratively developed the first sensor-fused perception pipeline for the car's first autonomous system
- Implemented lidar-based real-time range detection using Python and ROS, utilizing clustering and ground filtering algorithms to optimize accuracy and latency

National Science Foundation | REU Intern – Nanomaterials Research Sep 2023 – Mar 2024
- Optimizing electrical modeling scripts in MATLAB, reducing simulation runtime by 83% using matrix vectorization
- Analyzed 1000 electron transmission simulations to determine optimal DNA structures for memory storage

Institute for Protein Design | Information Technology Intern June 2023 – Sep 2023
- Enabled efficient tracking of 300+ users and nearly 1000 devices by developing an interactive map, utilizing PHP and mySQL for full-stack integration with the company's internal website
- Assisted with PC management, maintaining Linux NFS systems, and troubleshooting equipment

PROJECTS & INVOLVEMENT

Society of Women Engineers | Major Chairs Director Sep 2022 – Present
- Increased member recruitment and involvement by planning fun and impactful events, empowering women in the UW Engineering community, overseeing 11 committee members across all engineering departments

Convolutional Neural Network (CNN) for Video Classification | PHYS 417: Neural Networks June 2023
- Collaboratively built a CNN using Pytorch, achieving 97% accurate automated video frame classification of lab mice, training the model on 10 hours of video, cut into 10,000+ images

Flappy Bird on FPGA | EE 371: Design of Digital Circuits and Systems October 2023
- Implemented the game Flappy Bird on DE1-SoC board displayed on an external VGA, writing 14 modules and testbenches in SystemVerilog for simulation and verification in Intel ModelSim
- Designed game flow using ASMD charts, specifying RTL operations and debugging timing issues

Graduate Admissions Analysis & Prediction Model | Undergraduate Research Sep 2022 – May 2023
- Achieved 85% accuracy in predicting application decisions through training and optimizing a logistic regression model, utilizing feature scaling techniques, one-hot encoding, and missing value imputation
- Developed a data processing pipeline in Python using Pandas and Scikit-learn to clean, transform, and prepare a dataset of over 7000 applicants, generating automated data insights for the admissions department