# Hillary Luan

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## EDUCATION

**University of Michigan - LSA Honors** **Ann Arbor, MI**
*Bachelor of Science in Computer Science & Cognitive Science* *May 2025*

- GPA: 3.9/4.0
- Skills: C++, Java, HTML/CSS, React, AWS, Python, JavaScript
- Courses: Discrete Math, Data Structures and Algorithms, Computer Architecture, Web Systems (current)
- EECS 203 (Discrete Math) Instructional Aide - Team Lead

## EXPERIENCE

**Amazon** **Detroit, MI**
*Junior Software Developer - Java, AWS, Kinesis, Cloudwatch, Backend* *June 2023 - present*

- Developed backend platform for internal teams to ingest communication data for Sellers on Amazon
- Coded program to record vital platform metrics, viewable on Cloudwatch in easy-to-read graphs
- Implemented code to route different data to corresponding regions using AWS Kinesis Data Streams

**Ford Motor Company** **Dearborn, MI**
*Software Engineer Intern - React.js, HTML/CSS, JavaScript, Full-Stack Development* *May - Aug 2022*

- Developed frontend and backend of React/Express app using test-driven development to improve github code metrics trend tool for 10+ software development teams
- Used MongoDB and JSON files to develop backend to retrieve repo data from github
- Conducted user interviews and collaborated with product management and design to create final product
- Improved speed from old tool by 70% and added 4 user-friendly graphs using React libraries to show code quality trends of method length and cyclomatic complexity over the course of days, months, or years

**Biologically Plausible Neural Networks - Computer Vision Research** **Remote**
*Research Student - Python, CoLab, Machine Learning, TensorFlow* *July 2020 - May 2021*

- Implemented and ran neural networks using Python, CoLab, and numpy to analyze MNIST dataset in order to assess potential usability of biologically-plausible neural networks for different tasks and research
- Compared accuracy of spiking and convolutional networks to write paper on potential of biologically-plausible networks in comparison to commonly-used artificial networks; presented to a group of 4 students and research mentor Dr. Avani Wildani (Emory University)
- Analyzed accuracy differences of 2 biologically-plausible networks (spiking and recurrent) to inform researchers of benefits and drawbacks of different algorithms within realm of biological-plausibility

## PROJECTS

**Machine Learning Piazza Post Classifier** **Ann Arbor, MI**
*C++* *April 2022*

- Coded machine learning algorithm using natural language processing techniques to classify Piazza posts
- Used maps and binary search trees to calculate probability of each post using bag-of-words model

**CRISPR Biotechnology Website (link)** **Southfield, Michigan**
*HTML/CSS, JavaScript* *Jan 2020*

- Designed and coded (HTML/CSS, JavaScript) website from scratch on CRISPR mechanics and ethical concerns to raise awareness of the novel gene-editing technology
- Implemented critical interface features for user navigation and slideshow gallery
- Presented website to panel of 6 judges and placed 3rd at Michigan Council of Women in Technology Website Design Competition - High School Advanced

## SKILLS & INTERESTS

**Organizations:** Girls in CS Club - Outreach, Phi Sigma Rho - Candidate Vice President, DEI Chair
**Award:** National Center for Women & IT Aspirations in Computer Science 2021 MI Affiliate