Alex de la Iglesia

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Education

University of Michigan College of Engineering **Ann Arbor, MI**
B.S.E. in Computer Science, Minor in Mathematics (GPA: 3.976 / 4.00*)* *September 2021 - December 2023*

- Course Highlights: EECS 445 Machine Learning, EECS 487 Natural Language Processing, EECS 492 Artificial Intelligence, Math 465 Combinatorics, EECS 477 Algorithms, EECS 490 Programming Languages
- Awarded the William J. Branstrom Freshman Prize, University Honors and Dean's List for Fall 2021, Winter 2022
- Active member of Tau Beta Pi, elected Historian Officer in Winter 2023

Experience

University of Michigan **Ann Arbor, MI**
Instructional Aide for EECS 370 Computer Organization, EECS 445 Machine Learning *August 2022 - Current*

- Exam Leader: Responsible for integrating exam questions, and working with instructors to create bug-free exams
- Leads a discussion section, teaching around 30 students additional material and clarifying issues
- Provides office hours to clarify issues over homework, project, and exam material for students
- Leading a team of 12 graders to delegate grading tasks and resolving issues in grading

SLED Research Lab **Ann Arbor, MI**
Research Assistant *September 2022 - Current*

- Working on the Perceptually-Enabled Task Guidance (PTG) project led by Professor Joyce Chai, focusing on using Natural Language Processing (NLP) to guide user modeling and communication with a human while following a set of instructions
- Implemented data logging to a MongoDB database using API calls to a Python FastAPI application
- Conducting experiments with subjects for data collection and improving custom interaction system

Nokia - Deepfield **Ann Arbor, MI**
Software Engineering Intern *June - August 2022*

- Created new management software for users and permissions groups using React, allowing migration from existing legacy software while removing cross site scripting (XSS) vulnerabilities and improving UX consistency
- Modified backend software to allow user models to be a part of multiple permissions groups, allowing for more customizable permissions control implemented in new management software
- Designed new UI components with documentation to create consistent control over nested data structures

Intrepid Control Systems **Remote**
Software Engineering Intern *January - April 2022*

- Converted client-side UI of WiVi (Wireless communication device) control to a Single Page Application (SPA) style, eliminating refreshes between pages
- Refactored React codebase to memoize functions and components to improve website performance
- Utilized Redux to store previous user actions, eliminating repeated API calls to the database

University of Michigan Autonomous Robotic Vehicle **Ann Arbor, MI**
Computer Vision Subteam *August 2022 - Current*

- Developed Unity simulator of parking lot obstacle course for rendering lane-detection images for CNN training
- Designed CNN architecture for detecting lane-lines in camera feed

Projects

Business Student Customer Relationship Management (CRM) Application (React, NextJS, Figma) *April 2022*

- Worked with 2 other software engineers and 1 user-experience (UX) student to develop a CRM intended for business students to build their networks, providing scheduled reminders to contact important contacts
- Developed a chrome extension using React and NextJS, and designed using Figma. Research was conducted with business students on an MVP to determine importance of features, and was modified to account for results

FIRST in Michigan Robotics Simulator and Tournament Manager (Unity, C#, PHP, SQL, Javascript) *November 2021*

- Developed a tournament management system in Docker, PHP, and SQL, allowing administrators to create and manage tournaments in a robotics simulator as well as HTML and Javascript frontend for admins and users
- Created a spectator client using Unity and C# to allow visitors to watch matches live in the simulator