Ethan Chan

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EDUCATION

University of Florida   **January 2023 - December 2025**
Bachelor of Science in Computer Science   Gainesville, FL

University of Central Florida   **August 2021 - December 2022**
Associate Degree   Orlando, FL

TECHNICAL SKILLS

Programming Languages: C, C++, Python, Java, JavaScript, HTML, CSS, SQL
Frameworks & Libraries: React, Next.js, Django, TensorFlow, pandas, NumPy, Scikit, OpenCV, Transformers, Ultralytics
Databases: MongoDB, MariaDB, Firebase, PostgresSQL
Tools & Systems: Git, GitHub, MySQL, Docker, Tableau, Microsoft Office (Word, Excel, PowerPoint), Linux, Windows, Mac OS

PROJECTS

Computer Vision Basketball Tracking System | Python, pandas, NumPy, OpenCV, Transformers, Ultralytics
- Built an object detection system processing basketball game footage at 30+ FPS, implementing YOLO v5 models to automatically track players and ball movements with 94% detection accuracy across 500+ test frames.
- Created modular software architecture with object-oriented design patterns and pickle serialization, implementing intelligent caching mechanisms that improved processing speed by 90% through memory optimization techniques.
- Engineered comprehensive visualization system using OpenCV graphics libraries for rendering geometric shapes and annotations, generating annotated video output with dynamic color coding across multiple object classes.

Machine Learning Image Classification Software | Python, TensorFlow, NumPy
- Architected deep learning pipeline leveraging transfer learning on pre-trained VGG16 Convolutional Neural Network, optimizing feature extraction and classification layers.
- Designed scalable ML infrastructure with automated data augmentation, hyperparameter tuning, and model versioning, including model training with test/train/validation splits.

Portfolio Website - ethanchan.app | React, JavaScript, HTML, CSS
- Implemented React hooks, state management, and component lifecycle optimization, reducing re-rendering and creating modular architecture for easy content updates with maintainable code.
- Deployed live application with 99.9% uptime using CI/CD pipeline, incorporating modern web development principles that improved user engagement metrics by implementing scroll-triggered animations, dynamic content rendering, and cross-browser compatibility.

Library Manager | JavaScript, HTML, CSS. Python**,** MongoDb
- Developed full-stack web application handling 100+ book inventory with real-time data processing, user authentication system, and database management using CRUD operations.
- Built REST API / RESTful API connecting React frontend to Python backend with MongoDB database, processing 10+ concurrent user sessions with <200ms response times through API optimization and scalable architecture.
- Collaborated with development team using Git, GitHub for version control and Jira for agile project management, delivering features through sprint cycles with automated testing, code reviews, and team collaboration.

WORK EXPERIENCE

Hana Sushi | Server   **May 2023 – Present**
- Delivered customer service in a fast-paced environment, while maintaining attention to detail and professional communication skills.