

JOANNE KIM

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Education

University of Florida

Bachelor of Science, Computer Science

Bachelor of Science, Mathematics

Honors Program, Dean's List, UF 2023 AI Scholar

May 2025

GPA 3.86/4.0

Gainesville, FL

Relevant Coursework

- Data Structures & Algorithms, Database Systems, Operating Systems, Fundamentals of Machine Learning, Linear Algebra, Engineering Statistics, Number Theory, Abstract Algebra, Real Analysis and Advanced Calculus

Experience

University of Florida, College of Veterinary Medicine

Mar 2023 – Dec 2024

Machine Learning Research Assistant

Prof. Jon Kim

- Co-author “Deep Learning-Assisted Canine Lymphoma Classification” submitted to Veterinary Clinical Pathology
- Write PyTorch model & preprocessing code to diagnose lymphoma in ~1000 images with Convolutional Neural Networks
- Identify tumor biomarkers by training classification models and using statistical feature selection methods in scikit-learn
- Leverage high-performance computing for large-scale data processing and optimize model training in medical domains

Bank of America

Jun 2024 – Aug 2024

Data Management Intern

Dallas, TX

- Work in the permission access management team to automatically identify toxic combinations posing security risks
- Monitor user access violations of internal applications and raise issues to app managers to remediate data vulnerabilities
- Partner with project managers to formulate annual risk assessments with business specialists of individual risk areas

GE Appliances, a Haier company

Jan 2024 – May 2024

Software Engineering Co-op

Louisville, KY

- Utilize object-oriented C to implement the LED oven Sabbath Mode feature for the production range controller board
- Develop state machines based on module requirements, employing the Model-View-Presenter design pattern
- Write and run integration tests on physical units adhering to Test-Driven Development practices
- Collaborate with cross-functional teams to ensure alignment with user needs and industry standards

Technical Skills

Languages: C/C++, TypeScript, JavaScript, Python, Java, SQL

Developer Tools: Git, VS Code, CI/CD, Docker, REST API, PostgreSQL, Google Cloud, Postman, Linux

Frameworks/Libraries: React, Express.js, TailwindCSS, Django, PyTorch, Scikit-Learn, CppUTest, Mapbox

Projects

ParkMark | *React, Express, PostgreSQL*

Jan 2025 – Present

- Design and develop responsive React/TailwindCSS UI from scratch, featuring interactive Mapbox interface
- Architect SQL database schema and build CRUD operations with efficient queries to reduce API consumption rate
- Configure serverless infrastructure using Google Cloud Run, Storage, OAuth, and Managed SQL
- Automate data processing by writing Python scripts that extracts and expands National Park Service geospatial data

Ray Tracer | *C++*

Nov 2024 – Present

- Use linear algebra and computer graphics concepts to build a ray tracer generating results in ppm format
- Design classes for 3D vector space objects and render multiple objects with anti-aliasing techniques to smooth the curves

Sign Language Detection | *Python*

Oct 2023 – Dec 2023

- Develop end-to-end neural network pipeline in PyTorch for detecting sign language letters in ~10,000 images
- Experiment with transfer learning on ResNet, optimize hyperparameters, and implement regularization techniques
- Increase accuracy from ~70% to ~98% by implementing hand segmentation pre-processing technique using OpenCV

Leadership

Korean Student Association

May 2022 – May 2023

Technical Chair

University of Florida

- Organize general body meetings and social events with 10 executive board members through weekly meetings
- Initiate official Instagram account and establish contact with cultural organizations for collaboration