

Evan Chen

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EDUCATION

University of Illinois Urbana-Champaign

Master of Science in Computer Science; GPA: 4.00

Champaign, IL

Aug. 2024 – Present (Expected: May 2026)

University of Illinois Urbana-Champaign

Bachelor of Science in Information Science; GPA: 3.96

Champaign, IL

Aug. 2021 – May 2024

EXPERIENCE

HabiTerre

DevOps Engineer (Contract)

Chicago, IL (Remote)

May 2025 – Aug. 2025

- Led development of multi-environment infrastructure as code using Terraform to establish AWS CodePipeline workflows, enabling scalable deployments for the internal operations platform and customer-facing API
- Improved deployment time from 2 weeks to 1-2 days for 18 AWS services defining 200+ integrated components
- Pioneered integration between existing CI/CD tools (Jenkins, Spinnaker) and new IaC pipeline, collaborating with senior engineers to evaluate and optimize deployment strategies while maintaining system reliability
- Developed detailed disaster recovery and backup strategies for S3, RDS, ElastiCache, and Bitbucket source code
- Authored detailed Confluence documentation, runbooks, and checklists covering IaC workflows, manual contingency steps, and disaster recovery to ensure operational consistency across engineering, science, and product teams

Full Stack Engineer Intern

May 2024 – Aug. 2024

- Developed features for a carbon processing pipeline handling millions of U.S. Corn Belt States' fields: automated QA/QC, real-time data refresh, and interactive data visualization components using React.js, D3.js, and ChakraUI
- Designed and implemented modular UI components including project selection interfaces, navigation systems, and reusable statistics modules, significantly improving internal platform usability and maintainability
- Built comprehensive cloud monitoring system with FastAPI and AWS CloudWatch, featuring multi-dimensional metrics, severity-based alerting (SEV1-SEV3), and controller-specific analytics across prod and dev environments
- Refactored AWS usage towards SOC2 compliance by optimizing security groups, cache encryption, and monitoring

Data Engineer Intern

Nov. 2022 – May 2023

- Developed Python-based backend utilizing Flask API requests to facilitate data interactions, authenticate user permissions, and populate HabiTerre's carbon emissions analysis web platform
- Scripted the population of an AWS RDS database of historical and predictive agricultural data for over 7 million U.S. farm fields, aggregating into county and state-level data for data visualizations on a React-Redux platform
- Modified over 12 unique data visualizations on the front-end of the React-Redux platform using ChartJS
- Improved frontend image load time by 66% through caching and endpoint generating pre-signed image URLs

State Farm Labs

Software Engineer Intern: Computer Vision Team

Bloomington, IL (Hybrid)

May 2023 – Aug. 2023

- Constructed an end-to-end web application to showcase 4 computer vision models, enabling user interaction, image upload, processing, and dynamic display of results for image classification, object detection, and image captioning
- Collaborated with a team of 6 engineers and data scientists to design cloud-based back-end processing for various computer vision models via POST requests. Solution integrated AWS SageMaker, Lambda, and API Gateway
- Built front-end UI using ReactJS and customized MUI components, deploying to dev and prod environments

Reveal Data

Data Science Intern

Chicago, IL

May 2022 – Aug. 2022

- Prototyped the adaptation of a TensorFlow BERT deep-learning language model fine-tuning pipeline from AzureML to AWS SageMaker, integrating S3, EC2, and ECR services
- Built and optimized over 10 different NLP classification model themes using BERT technologies and cross-validation testing, resulting in an overall average score improvement of 5% F1 in comparison to SVM models
- Utilized seaborn to generate visualizations evaluating the performance and changes in classification model scores
- Compiled model training results into concise reports and consolidated ML workflows into thorough documentation

RESEARCH

UIUC Agroecosystem Sustainability Center

Champaign, IL

Graduate Research Assistant — Advisors: Kaiyu Guan, Shenlong Wang

Aug. 2024 – Present

- Building demo agricultural digital twin platform hosting virtual representations, simulations, and scientific visualizations at four spatial scales: plant, field, regional (watershed/county), and national levels
- Engineering farmer-facing fertilizer recommendation tools at tools.asc.illinois.edu with scalable AWS microservice architecture (CloudFront, EKS, Load Balancer) routing data processing traffic to generate custom visualizations
- Deployed a survey site of farmer-facing tools by configuring a CloudFront distribution, implementing Lambda functions for authentication and data logging, setting up a backend database, modifying Kubernetes files for load-balanced deployment, and updating the TypeScript React frontend to track key user interaction metrics
- Updating asc.illinois.edu (Agroecosystem Sustainability Center) website structure, templating, and content
- Created data processing pipeline for instance segmentation and topology labeling of over 600 dense point clouds
- Refactored soil organic carbon economics tool UI by implementing a responsive three-column layout with custom CSS styling and modernizing deprecated code dependencies in R Shiny, hosted at potash.shinyapps.io/soc-econ

Undergraduate Research Assistant — Advisor: Kaiyu Guan

Aug. 2023 – May 2024

- Developed 3D visualization in NVIDIA Omniverse of plant models reconstructed via procedural generation
- Investigated software for integration of physics-based radiation modeling to Sun and crop growth simulations
- Automated conversions between mesh file types (.obj, .usd, .ply) for 3D asset use in Blender and USD Composer

PUBLICATIONS

T. Cheng, A. J. Zhai, **E. Z. Chen**, R. Zhou, Y. Deng, Z. Li, K. Zhao, J. Shiu, Q. Zhao, Y. Xu, X. Wang, Y. Shen, S. Wang, L. Ainsworth, K. Guan, S. Wang, *Demeter: A Parametric Model of Crop Plant Morphology from the Real World*, IEEE/CVF International Conference on Computer Vision, 2025

TEACHING

University of Illinois Urbana-Champaign

Champaign, IL

Course Assistant: STAT/IS/CS107

Aug. 2022 – May 2024 (Semesterly)

- Authored and edited over 100 programming and data science questions and walkthroughs for mastery.cs.illinois.edu
- Guided weekly lab sessions and office hours providing coursework and technical assistance for over 1200 students
- Wrote, updated, and maintained 14 weekly Jupyter Notebook labs that teach data science concepts in Python through practical applications of Pandas and sk-learn to UIUC and course-specific student datasets
- Built reproducible content with Python and Matplotlib to generate chart variations, integrate them into Markdown-based question banks, and enable extensibility for additional visualized question sets

PROJECTS

Simulating Edge Device Inference: Containerized LLM model sharding system that simulates inference across virtual edge devices, enabling practical latency and efficiency tests on a single device with configurable constraints

Four Seasons Platformer: Simple thematic side-scrolling 2D platformer game created in Godot using GDScript

IlliniMap: Web app featuring an interactive map of upcoming UIUC events powered by MySQL and Python scraping

Multimodal Machine Learning: PyTorch tabular/image housing price prediction model for State Farm HackDay '23

Elden Ring Speedrun Optimizer: Graph-based (Dijkstra's) speedrun route optimizer using C++ and Python

HONORS AND AWARDS

James Scholar Honors - School of Information Sciences

Fall 2021 – Spring 2024

Dean's List (Top 20% GPA) - School of Information Sciences

Fall 2021 – Spring 2024

TECHNICAL SKILLS

Programming Languages: Python, JavaScript (React.js), TypeScript, SQL, C++, HTML/CSS

Cloud Services: AWS (Lambda, API Gateway, RDS, SageMaker, S3, EC2, ECR), Azure (AzureML, Blob Storage)

Developer Tools: Git, Terraform, BitBucket, Postman, Docker, VS Code, PyCharm, Spinnaker, Agile Methodologies

Python Libraries and Frameworks: pandas, boto3, Flask, matplotlib, seaborn, sk-learn, NumPy