

# Ethan Chen

www.blue-mirror.com · www.github.com/ethanchen143

## EDUCATION

### Cornell University

Master of Engineering in Computer Science (Incoming, Fall 2025)

Aug. 2025 - May 2026

### University of Illinois at Urbana Champaign

Bachelor of Science in Computer Science + Music

Sep. 2021 - May 2025

Coursework: Applied Machine Learning, Database System, Artificial Intelligence, Deep Learning for Computer Vision, Natural Language Processing, Programming Language, Computer System, Data Structure, Algorithms and Models. GPA: 3.74

## EXPERIENCE

### Creatorain (AI influencer marketing startup)

AI Developer

Jun. 2024 - Oct. 2024

- Developed a customer support AI chatbot for Nutr (Shark Tank company.)
- Automated email campaigns using prompt engineering and LLM pipelines with Python.
- Utilized vector database with Pinecone, reducing ChatGPT API costs by 90%.
- Built robust scrapers with Selenium and Puppeteer to engineer influencer data.

Chief Information Officer

Oct. 2024 - Present

- Spearheaded the development of Creatorain.com, hosting weekly dev meetings and managing PRs on GitHub.
- Developed the web app utilizing React, MongoDB, and Redis, deployed on AWS Amplify.
- Created a database of 1.4 million influencers using PostgreSQL and Milvus, deployed on GCP.
- Presented AI-driven marketing solutions at IMTS and IFT conferences, securing new clients.

## PROJECTS

### Algophony (Deep Learning, Generative AI)

Developer (class project)

Jan. 2024 - May 2024

- Trained a deep learning music generation models in PyTorch, using CVAE and GAN architecture.
- Engineered over 500GB of audio training data, employing tools like NumPy and Pandas.
- Optimized data processing with batch and parallel processing techniques, reducing computation time by 85%.

### LoopBop (Web Dev, 3D Modeling, Graph Database)

- Developed a 3D pop music explorer game app, utilizing Three.js, d5.js, Typescript and React.
- Optimized song quires using graph database with Neo4j, enabling users to explore musical connections.
- Implemented a game environment with websocket for real-time multiplayer game play.

### Reinforced Poker (Reinforcement Learning)

- Trained an AI poker bot using Q-Learning, outperforming algorithmic bots and real players.
- Simulated 15 million games, running critical components in C/Cython and reducing training time by 30x.
- Deployed the bot to play online using Javascript and jQuery, enabling continuous reinforcement learning.

### Bubble Synth (Web Dev, Signal Processing)

- Developed a creative music generator that generates evolving soundscapes stochastically.
- Leveraged Tone.js as the sound engine and optimized React hooks to reduce latencies for signal processing.

### AltCredit (Data Engineering, Machine Learning)

- Designed a ML credit scoring system at HackIllinois '25, expanding loan access for undocumented individuals.
- Built a data pipeline using PySpark, updating the classification model in real time.

### Hot or Not (Data Analysis, Machine Learning)

- Scraped data for hit song prediction, analyzing thousands of songs and over 70 features.
- Fine-tuned classification models (RF and XGBoost), achieving 91% accuracy and a 0.68 F1 score.

## SKILLS

Python, JavaScript/TypeScript, C/C++, Scala, Swift, Java  
React, SQL, PyTorch, Apache Spark, Neo4j, MongoDB, Git, AWS, GCP