Paige Blum

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EDUCATION

Colgate University   **Hamilton, NY**
Bachelor of Science in Computer Science, summa cum laude   Graduated: May 2024

Languages: Python, C++, Java, JavaScript, SQL, CSS, HTML
Frameworks & Libraries: TensorFlow, PyTorch, Next.js, Tailwind CSS
Tools: Git, PostgreSQL, PowerBI, Tableau
Focus Areas: Scalable systems, applied ML, real-time simulation, integrating AI into daily workflows, creative applications of GenAI

PROFESSIONAL EXPERIENCE

Microsoft | Infinity Ward (Call of Duty)   **Los Angeles, CA**
AI Engineer   May - August 2023 (internship), May 2024 - Present
- Design AI systems for vehicles, dialogue, and animals, ensuring low-latency reliability across 100M+ players
- Integrate real-time, event-driven AI systems across Call of Duty titles (Modern Warfare, Black Ops)
- Improved animation pose-detection accuracy by 85% through custom ML algorithms
- Supervised and mentored 2 interns on a reinforcement learning project for tactical decision making
- Active member of AI Guild, a board dedicated to AI research initiatives for gameplay and animation

LiveTime | Event Networking Startup   **Remote**
Part Time Software Engineer   March 2025 - Present
- Built prototype recommendation engine with integrated data sources; including event-seeding pipeline for new campus launches
- Designed full stack analytics platform for sponsors to track how effective their investments are paying off

Novacoast   **Remote**
Data Analytics Intern   May - August 2022
- Designed and built ETL pipelines to provide senior management with analytics on internal employee performance

WRCU Radio Host   **Hamilton, NY**
Rabbit Hole Radio   September 2020 - May 2024
- Co-hosted hour long weekly radio show that broadcasted throughout campus and on local radio
- Served on station board, contributing to programming and club leadership

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SAMPLE PROJECTS

Generative AI for Creative Media
What Does Music Feel Like?   **Current**
- Created a pipeline for album cover art generation from lyric sentiment and audio feature analysis to digitally encapsulate the essence of a record in a single image using Next.js + TypeScript + Tailwind, FastAPI, PyTorch + Hugging Face Transformers for NLP, librosa/Essentia for audio features, Stable Diffusion XL for image generation

Exploring Generative AI: What Makes an Image Steerable?   **2024**
- Conducted senior thesis research on the steerability of convolutional neural networks
- Trained a linear regression model to discover discrete features that impact steerability and a CNN on raw images to rank non-discrete features
- Identified areas of improvement for various text to image models' image-based processing using MSE, R-squared score, and feature extraction

Lyric Generation Experiment   **2023**
- Developed a song lyric generation model using a bidirectional LSTM and recurrent neural network
- Reference medium.com/@paigemblum for a deep dive into the project and results

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AWARDS, & INTERESTS

Awards: Dean's list (2020-2024) ♦ Recipient of $3,000 AspireIT:Peer-led Computing Education Grant (2019-2020) ♦ Recipient of the Bolshoi Ballet Academy's NSLI-Y scholarship sponsored by the US State Department and US Department of Education (2018)
Extracuriculars: 11 years of Vaganova style ballet training ♦ Sorella Society new member director ♦ Member of Colgate's AI student advisory board committee
Interests: Painting, cooking, hiking