# **ZACHARY DECKER**

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### **EDUCATION**

Cornell Tech (Cornell University), New York, NY

May 2025

Master of Engineering in Computer Science | GPA: 4.0

Relevant Coursework: Startup Studio, Deep Learning, Applied Machine Learning, Natural Language Processing

Rose-Hulman Institute of Technology, Terre Haute, IN

May 2024

Bachelor of Science in Computer Science and Software Engineering | GPA: 3.71

Relevant Coursework: Software Design, Generative AI, Product Management, Web Development, Database Systems

#### **TECHNICAL SKILLS**

Tools:Microsoft Office Suite, Google SheetsLanguages:Python, C++, JavaScript, SQL, HTML/CSS

OS: Windows, Linux, MacOS

### **EXPERIENCE**

## Scale AI, Strategic Projects Lead, New York City, NY

Summer 2025

Generative AI start-up working in delivering agentic data to top AI firms

- Led team sprints improving pipeline data quality by 20% and reducing handling time by 30%
- Integrated quickly with agentic coding data delivery team, providing insight into creating efficient full-trace trajectories

# DEKA, Software Engineering Intern, Manchester, NH

Fall 2022 - Spring 2024

American engineering and innovation firm founded by inventor Dean Kamen

- Researched and experimented with terrain mapping algorithms for a wheeled autonomous vehicle in Python
- Collaborated across teams to integrate the proposed algorithm while maintaining reliability of production code in C++ and ROS
- Improved path planning consistency and expanded the vehicle's ability to traverse more complex environments
- Wrote detailed documentation explaining the updated algorithm to technical and non-technical stakeholders

### AON Devices, Machine Learning Intern, Irvine, CA

Summer 2022

Develops super low-power, high-accuracy edge AI solutions

- Wrote scripts and developed tools in Python for pre-processing large datasets of audio samples to facilitate model training
- Generated research reports on state-of-the-art low-power transformer models

### **PROJECTS**

PolyRook, Cornell Tech Startup Award Winner (JavaScript, Hugging Face)

Winter 2024 – Spring 2025

Startup Studio project developing AI 3D environment generator built on open-source JavaScript voxel editors

- Built out go-to-market plans, pitched to VCs, and presented idea to hundreds at Cornell Tech Studio Day
- Implemented state-of-the-art 3D generation pipelines to create consistent environments from a prompt
- Launched modern and responsive frontend supporting 100+ active users

Pitch Room Fall 2024

Product Studio project developing AI email extension to improve venture capital analysts' workflow

- Worked with MBAs to develop go-to-market strategy and market sizing
- Built prototype RAG pipeline for collecting relevant background information on early-stage startups

### Course Registration Chatbot (Python, LangChain, Node.js)

Spring 2024

Developed Retrieval Augmented Generation (RAG) pipeline for pretrained LLMs to provide accurate school-specific information.

- Built a LangChain-based retrieval chain over vectorized advisor notes (e.g. Pinecone/FAISS), achieving >90% precision on document lookup
- Fine-tuned a GPT-3.5 Turbo model on registrar transcripts and advisor FAQs, improving response accuracy on course prerequisites and policies
- Created event tracking, logging system, and a user feedback portal to capture patterns for continuous improvement

## "Organize My Life" File Organization App (React Native, AWS)

Fall 2023 - Spring 2024

Senior project building a cross-platform file management solution for iOS and Android

- Managed complete product lifecycle from initial architecture to production-ready application
- Implemented CI/CD pipelines using GitHub Actions for automated testing and deployment