

# JOHNATHAN MO

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## Education

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### Columbia University

New York City, NY

*Bachelors of Engineering in Computer Science*

*Expected May 2027*

- **GPA:** 3.9/4.0 — **Selected Coursework:** Data Structures, Advanced Programming, Databases, Operating Systems, User Interface Design, Discrete Math, Linear Algebra
- **Activities:** Columbia Build Lab, CGUI Lab, Application Development Initiative, V1 Tech Entrepreneurship (Head of Marketing), Columbia Space Initiative

## Experience

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### Google

Sunnyvale, California

*Systems Software Engineering Intern*

*May 2025 - Present*

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### Mayah Design

Hybrid in NYC, New York

*Software Engineering Intern*

*August 2024 - January 2025*

- Constructed product visualization features using **React.js**, **TailwindCSS**, and **Node.js** for a novel interior design recommendation web platform, improving visual efficacy by 50%
- Collaborated with product managers, other developers, and the CEO to deploy code over **AWS** and **Docker**. Utilize **SQL** and **Spring Boot** to optimize the furniture database, leading to 60% increase in recommendation accuracy

### National Institute of Biomedical Imaging and Bioengineering (NIBIB)

Bethesda, MD

*Software Engineering Summer Intern, IDEAS Lab*

*June 2024 - August 2024*

- Developed a medical augmented reality application, integrating **Unity**, **C#**, and **Photon Fusion** for multi-user interactions. Leveraged **OpenAI** and **Microsoft Azure Speech Cognition Services** for intelligent voice commands.
- Delivered presentation to the Scientific Director of the NIBIB and a team of 12 surgeons and residency students to demonstrate the potential for AR to transform surgical workflows.

### Stanford Ophthalmic Informatics and Artificial Intelligence Group

Palo Alto, CA

*Research Intern*

*May 2023 - September 2023*

- Conceptualized and executed research project leveraging **Google Cloud Platform**, **HuggingFace Transformers**, **Numpy**, **Pandas**, **PyTorch**, and **Gradio** to compare effectiveness of traditional Convolutional Neural Networks against Visual Large Language Models on recognizing Glaucoma Images.
- Harnessed **Few-Shot Prompting**, and **Chain-Of-Thought** prompting to improve VLLM performance by 30%.

## Personal Projects

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### Semantic Search for LinkedIn (Click Here)

- Created Locked In, a full stack app that uses dynamic **SQL** generation and **vector embeddings** to enable 750+ users to search LinkedIn with natural language and automatically generate and send cold emails using the **Gmail API** and **LinkedIn API**. The product launch went viral on LinkedIn, X, and YouTube, garnering over 200,000 impressions.

### Multiplayer Typeracing Game (Click Here)

- Launched PlayTypr.com, a real-time multiplayer typeracing game built using **Websockets**, **Express**, **Vite.js**, **Firestore Auth**, and deployed with **Railway** that had  $\approx$  1000 users at its peak.

### Manu.AI

- Implemented image-based questions using **OpenAI API**, **Supabase**, **FastAPI**, and designed frontend using **Next.js** to create a B2B **Full Stack** service turning inconvenient traditional user manuals into interactive digital knowledgebase with chat and image query capabilities. Deployed with **Docker** and stored files with **Amazon S3**.

## Technical Skills

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**Languages:** C, C++, CSharp, Python, Java, React, HTML/CSS/JavaScript, SQL, TypeScript, Bash, Protobuf

**Tools:** Cursor, Visual Studio, Unity, VS Code, XCode, Onlook, Figma, Adobe XD, Tmux, Docker, Postman, Vercel, Netlify

**Technologies/Frameworks:** Git, PyTorch, Next.js, OpenAI, Microsoft Azure, MRTK3, Photon, Redis, Heroku, TensorFlow, NumPy, Pandas, Google Cloud Platform, Linux/UNIX, gRPC, LangChain, CI/CD

**Interests:** Video Editing, Vlogging, Tech Products, Calisthenics, Hiking, Swimming, Saxophone, Videography, Anime