Aniruddhan Ramesh

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EDUCATION

University of Cincinnati, Cincinnati, OH **Class of 2027**
Bachelor of Science, Computer Science **GPA: 3.99**
Honors: International Outreach Scholar, University Honors Scholar, Dean's List, Mantei / Mae Scholar, IEEE-HKN Tau Chapter
Relevant Coursework: Data Structures and Algorithms, Operating Systems, Database Design, Computer Networks, AI Principles

TECHNICAL SKILLS

Programming: Java, Python (Flask), JavaScript/TypeScript (React, Next.js), Golang, Rust, C++, SQL
Machine Learning: Tensorflow, PyTorch, Scikit-Learn, Computer Vision, NLP, DETR, Autoencoders, BERT, LLMs
Web & Cloud: Flask, RESTful APIs, AWS (EC2, S3, RDS), GCP (Cloud Run, Big Query), Terraform, Agile Development
Databases & Tools: PostgreSQL, MySQL, MongoDB, SQLite, ConvexDB, Unix/Linux, Clerk, Docker, Git, CI/CD

PROFESSIONAL EXPERIENCE

Algoverse, AI Research Intern, Cincinnati, OH | *Part-time* **06/2025 – Present**
- Architected n-gram indexing pipeline and extracted activations across 143 LLM checkpoints for scalable analysis
- Devised parallelized polytope analysis to accelerate processing of millions of activation vectors, revealing evolutionary patterns in neuron representations tied to n-gram statistics
- Contributed research accepted to the NeurIPS 2025 Mechanistic Interpretability Workshop

ICDCU Lab, Bioinformatics Software Engineer, Cincinnati, OH | *Part-time* **01/2023 – Present**
- Implemented Flask based clinical research management system using an Agile user-centered design framework, resolved 197 usability issues, achieved a SUS score of 88.7, and co-authored a peer-reviewed publication in ACI Open (Jul 2025)
- Optimized ML pipeline for medical residency dashboard, cutting training time by 90% through efficient model architectures

Kinetic Vision, Machine Learning Intern, Cincinnati, OH **05/2025 – 08/2025**
- Architected Volumetric Autoencoders and DETR models in PyTorch for centerline detection of surgical tools, generated synthetic 3D training data to augment limited real-world samples, reducing manual annotation efforts by 75%
- Automated data pipelines and provisioned cloud infrastructure using Terraform on GCP, improving deployment reliability

Phillips Edison & Company, Software Engineering Intern, Cincinnati, OH **01/2024 – 12/2024**
- Led 3-person offshore team and implemented AI-powered ETL pipelines to extract data from real estate documents, reducing extraction time by 80% while streamlining data flow into business applications and data warehouse systems
- Designed REST APIs for AI-driven invoice extraction, improving accuracy and speed; optimized databases through normalization, migrations, and SQL, and delivered Power BI dashboards for real-time insights

LEADERSHIP & ACTIVITIES

Vice President, IEEE HKN – Tau Chapter, Cincinnati OH **08/2025 – Present**
- Directed chapter operations, led outreach initiatives, and increased student engagement through events, and workshops

Managing Partner & Director of Deal Flow, Bearcat Ventures, Cincinnati OH **01/2024 – Present**
- Led strategy for $1M student venture fund, directed sourcing of 10+ startups and completed 3 high-value investments

Startup Venture - PhizzIO, Cincinnati, OH **01/2023 – 08/2025**
- Co-founded PhizzIO, dedicated to enhancing users' physical therapy experience and boosting treatment adherence by 70%
- Strategized business model, raised $26,000 in funding and led product development as technical co-founder

PROJECTS

OUMI – Open-Source LLM tooling (6k+ stars, 35+ Contributors)
- **PR #1897 –** Implemented Hugging Face cache management for CLI, allowed configuration of cache directories and environment flags, reducing redundant downloads and improving developer onboarding.
- **PR #1678 –** Added collator debugging to OUMI, exposing tokenization and batching steps for easier troubleshooting

Kite AI – Version Control Assistant
- Architected CLI and MCP tool in TypeScript, to simplify version control, resolve merge conflicts and improve git workflows
- Fine-tuned gpt-oss-20b model (SoarAILabs/KiteResolve-20B) through LoRA for merge conflict resolution, achieving 17,000+ Hugging Face downloads

State-of-the-Art Mridangam Transcription
- Developed CNN using PyTorch for musical note transcription of Mridangam, achieving 91% accuracy (7% above baseline).

AWARDS

- "Best Undergraduate Student" award by Department of Computer Science, University of Cincinnati **04/2025**
- "Most Technically Impressive Project" & "Best Use of AWS" award at RevolutionUC Hackathon **03/2025**
- Mantei / Mae Scholarship Award for Academic Achievement and Excellence **04/2024**