Nikhil Mathihalli
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EDUCATION

University of California, Berkeley — **Berkeley, California**
B.S. in Electrical Engineering and Computer Science — *Expected Graduation May 2027*

- **Honors:** Regents' and Chancellor's Scholar
- **Concentration:** AI and Machine Learning; **Major GPA:** 4.00
- **Related Coursework:** Artificial Intelligence, Machine Learning, Deep Learning, Reinforcement Learning, Efficient Algorithms & Intractable Problems, Database Systems, Data Structures, Discrete Math, Probability Theory, Computer Architecture, Operating Systems, Circuits

EXPERIENCE

Susquehanna International Group, LLC (SIG) — **Bala Cynwyd, PA**
Incoming Quantitative Trading Intern — *June 2026 – August 2026*

Berkeley AI Research (BAIR) — Robotic AI Learning Lab (RAIL) — **Berkeley, CA**
Undergraduate Researcher; advised by Sergey Levine, William Chen — *September 2025 – Present*

- Researching reinforcement learning-based techniques to enhance robotic performance by improving a high-level vision-language agent's reasoning capabilities for sequential decision-making.

Scale AI — **Remote**
Software Engineer Intern — Gen AI — *June 2025 – August 2025*

- Supported the development of AI/LLM models by evaluating model outputs and ensuring data quality.
- Collaborated with AI research teams to refine model performance through structured evaluation and feedback cycles.
- Hands-on experience with LLMs and real-world AI applications across various domains.

Hermis, Inc. — **Saratoga, CA**
Software Engineer Intern — *March 2025 – May 2025*

- Built CourseMate, a full-stack academic management platform using **Next.js**, **React**, **TypeScript**, and **Flask**
- Designed scalable **PostgreSQL** schemas for storing user data, academic records, and course content
- Developed secure **REST APIs** with **JWT authentication** and role-based access control using Flask
- Leveraged **v0.dev** to rapidly generate responsive UI components, then integrated with custom backend logic
- Implemented **AWS S3** for file upload/storage and deployed the app via **AWS EC2**, **RDS**, and **CI/CD** pipelines

PROJECTS

AI-Powered Customer Churn & Startup Success Prediction — **Berkeley, CA**
Mentored by Manyam Mallela (Head of AI, Blueshift) — *March 2025 – Present*

- Developed a machine learning solution to predict customer churn from unstructured and incomplete CRM data, implementing preprocessing and engineering **15+ predictive features** (e.g., account age, login frequency), achieving **96% accuracy** with gradient boosting (**LightGBM**).
- Engineered a data-driven classification system to evaluate startup success using custom business logic on operational status, years active, and funding levels, creating robust labels for supervised learning.
- Built and tuned **XGBoost** models with custom cross-validation, resampling, and advanced preprocessing (target and one-hot encoding), optimizing F1 scores via manual grid search.

AWARDS

Math: 3x USA Math Olympiad Qualifier (Top 0.1%), 7x American Invitational Math Exam Qualifier
Physics: 1x USA Physics Olympiad Qualifier (2024)

SKILLS

Programming: Java, Python, JavaScript, TypeScript, HTML/CSS, SQL, Node.js, React.js, C++, C, R
Tools: Android Studio, IntelliJ, PyCharm, Eclipse, RStudio, AWS, Jupyter Notebooks, Git, GitHub, Docker
Technologies: React, Next.js, PyTorch, NumPy, Pandas, TensorFlow, scikit-learn, PostgreSQL
Other: Statistics, Algorithms, Academic Writing, Databases, Web Development, Problem Solving, Quantitative Analysis