

Archith Venkatesh

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EDUCATION

Georgia Institute of Technology; GPA: 3.81/4.0

Atlanta, GA

Bachelor of Science in Computer Engineering, Bachelor of Science in Mathematics

Graduating May 2027

TECHNICAL SKILLS

Languages: Python, C++, Java, SQL, JavaScript/TypeScript, C#, R

Quant/Data: NumPy, Pandas, SciPy, scikit-learn, PyTorch, TensorFlow, OpenCV, Plotly, Streamlit

Tools & Technologies: Git, Docker, Linux, REST APIs, SQL Server, ASP.NET Core, Flask, GCP

EXPERIENCE

Goldman Sachs

Jun 2026 – Aug 2026

Quantitative Strategist Intern

Salt Lake City, UT

- Developed Python analytics for Corporate Treasury's production liquidity buffer model, extending legacy SLANG logic to compute **LCR**, **NSFR**, and company-specific liquidity metrics.
- Built a **bootstrap resampling simulation** modeling forecast-error distributions and computing buffer values across multiple **percentile levels** for **30-day**, **90-day**, **6-month**, and **1-year** horizons.

Agilysys

May 2025 – Aug 2025

Software Engineer Intern

Alpharetta, GA

- Delivered a real-time membership analytics dashboard for **50K+** loyalty members, replacing static PDF reports with KPI, trend, and engagement analytics for hospitality clients.
- Designed **C#/.NET Core** REST APIs with **SQL Server**, standardizing authentication, pagination, and data access across **30+** endpoints.
- Developed a secure, **multithreaded** server-to-client print relay using web APIs and **SignalR**, enabling card printing in outbound-only client networks without inbound firewall changes.

CREATE Labs at Georgia Institute of Technology

Aug 2024 – Dec 2024

Software Engineer Research Assistant

Atlanta, GA

- Improved diagnostic imaging classification models to **85% accuracy** using **PyTorch**, **TensorFlow**, transfer learning, and augmentations including Mixup and CutMix.
- Automated image preprocessing pipelines with **Python**, **TensorFlow**, and **OpenCV**, reducing manual processing time by **80%** for large-scale model training and validation.

ElysianLoop

Jun 2024 – Aug 2024

Software Engineer Intern

Atlanta, GA

- Reduced homepage load time by **46%** through responsive JavaScript/Bootstrap development and frontend performance optimization.
- Created Google Analytics, PHP/SQL, and Chart.js reporting features for automated lead capture and conversion analytics, contributing to a **35%** increase in conversions.

PROJECTS

Limit Order Book Market-Making Simulator | *Python, NumPy, Pandas, Streamlit, Plotly*

- Built an event-driven limit order book simulator modeling bid-ask spreads, queue position, stochastic order flow, fills, fees, latency, inventory risk, and mark-to-market P&L.
- Implemented Avellaneda-Stoikov market making with volatility, microprice, and order-flow imbalance signals; backtested across **10,000** simulated paths with Sharpe, drawdown, fill rate, and inventory metrics.

Options Pricing & Volatility Surface Engine | *Python, NumPy, SciPy, Streamlit, Plotly*

- Engineered an options pricing engine implementing Black-Scholes, binomial tree, and Monte Carlo models with Greeks, implied volatility calibration, and portfolio stress testing.
- Calibrated implied volatility across **500+** synthetic option contracts and visualized volatility smiles, strike-expiry surfaces, skew, term structure, pricing error, and Greek exposure.

DermaScan AI | *Python, PyTorch, React*

- Trained a CNN-based image classifier in **PyTorch**, achieving **87% accuracy** and reducing overfitting by **15%** through targeted data augmentation.

LEADERSHIP AND INTERESTS

Interests: Competitive Chess Player, AMC 10/12 – Top 5% Nationally, Classical Piano, Powerlifting

Organizations: GT Trading Club, Vice President of Forsyth Chess Club, Phi Sigma Kappa Social Vice President