Anjan Athreya

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Education

Stony Brook University (SBU) Stony Brook, NY

BS, Computer Science and Applied Mathematics & Statistics, Dual Major, GPA: 3.53 *Expected Dec 2027*

Accelerated 3-year graduation track. Average course load: 17 credits per semester.

Relevant Coursework: Analysis of Algorithms, Data Structures, Systems Fundamentals, Programming Languages, Software Development, Computational Geometry, Probability/Statistics, Linear Algebra

Leadership: Project Manager, AI Community @ SBU (700+ members); lead hands-on ML workshops for 80+ peers (Mar 2025 – Present)

Experience

AI Solutions Engineering Coop (Incoming) San Francisco, CA

IBM *Fall 2026*

- Building Python data-preparation pipelines, LLM tooling, and cloud automation to drive enterprise AI adoption.

Full Stack Software Engineer Intern Bohemia, NY

North Atlantic Industries *May 2026 – Present*

- Own the full lifecycle (design, deployment, operations) of a C#/.NET + Angular MCL platform, shipping V1 to production in 8 weeks — NAI's first move off manual PLM, impacting 200+ employees across 10+ departments.
- Architected a microservice pipeline (submission API → PLM middleware → Salesforce Propel) auto-building BOM hierarchies on a normalized, role-based SQL Server schema, replacing manual Propel entry with one-click MCL submission.
- Rebuilt the submission UI as a responsive split-screen Angular workspace with a custom draggable divider (Pointer Events, clamped 35–75%), so users edit the form and build requirements side by side instead of behind an overlay.
- Shipped an LLM-powered feature drafting special-requirement text from free-form input (prompt-engineered calls, keys via AWS Secrets Manager), collapsing a manual authoring step into a review-and-accept action.
- Ported NAI's 2-year-stale parts-inventory backbone into a new .NET microservice with a 24-table Arrow JSON shredder and transaction-safe rollback (∼7,100 LOC), reviving a change-resistant system for new features.

Software Engineer Research Assistant Stony Brook, NY

SBU College of Engineering (Prof. Shubham Jain) *Nov 2025 – Present*

- Built a dual-platform iOS/watchOS app (Swift, CoreMotion, HealthKit) fusing 18 Apple Watch and AirPods sensor channels, with an on-device pipeline: buffered streaming I/O, crash recovery, gzip compression cutting file size 60–80%.
- Adapting a rep-detection algorithm from arm-mounted IMUs to Apple Watch, designing a signal-processing engine (quaternion projection, Savitzky-Golay smoothing, hysteresis phase state machine) for real-time rep segmentation.
- Built a per-user PCA calibration that learns each lifter's motion axis and auto-tunes thresholds for a universal rep detector.

Software Development Intern Shelton, CT

LightBox Environmental Data Resources *May 2024 – June 2024*

- Automated ETL pipelines cleansing geospatial tax parcel data across all 50 U.S. states, cutting preprocessing time by 25%.
- Built Geo-JSON visualizations with the LightBox REST API and ESRI ArcGIS, cutting manual integration effort 30%.

Projects

ArXiv MCP for Claude Code (open source) | *Python, MCP, SQLite, ChromaDB* Apr 2026 – Present

- Built an open-source MCP server (15 tools) giving coding agents like Claude Code retrieval-augmented search over research papers via hybrid SQL (SQLite) + vector (ChromaDB) storage.
- Implemented full-text search, PDF annotation extraction, DOI resolution, duplicate detection, and KMeans clustering.

Circular: iOS Mapping & Routing App | *SwiftUI, MapKit, CoreLocation, Mapbox* Apr 2025 – Present

- Engineered dynamic route generation with geodesic distance algorithms (±0.1 mi) and turn-by-turn pathing; shipped to 100+ beta users with routing-quality and ETA telemetry.
- Cut API calls 50% and route-generation attempts 40% via tile/segment caching.

nb2prod (Notebook to Production) | *Python, AST, Streamlit, CLI, Poetry* Aug 2025 – Present

- Built a CLI + web tool converting Jupyter notebooks into production-ready Python packages via AST analysis and automated refactoring, cutting deployment from hours to minutes.
- Generated test suites with 100% coverage (25+ tests), readiness scoring, and execution-order validation.

Technical Skills

Languages: TypeScript/JavaScript, Python, C#, Java, SQL, Swift, C, HTML/CSS
Frameworks & Libraries: Angular, React, .NET, EF Core, Flask, SwiftUI, PyTorch, TensorFlow, scikit-learn, Hugging Face
Data & Systems: SQL Server, ETL Pipelines, Distributed Systems, REST APIs, ChromaDB, AWS, Observability, CI/CD
AI/ML: RAG, LLM Tooling, Prompt Engineering, Embeddings, Information Retrieval, MCP
Testing & Practices: NUnit, Unit & Integration Testing, Accessibility, Code Review, Agile
Concepts: Data Structures, Algorithms, OOP, Computational Geometry, Debugging