Aditya (Adi) Kanteti

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Education

University of California, Santa Cruz   Sept 2024 - June 2026
- B.S. in Computer Engineering, minor in Environmental Sciences and Computer Science   **GPA: 3.5**
- Coursework: Data Structures and Algorithms, Machine Learning, Advanced Algorithms, Computer Networks, System Design

Berkeley City College   Aug 2022 - May 2024
- A.S. in Computer and Electrical Engineering, visiting student at UC Berkeley (EECS)   **GPA: 3.9**
- Coursework: Data Structures and Algorithms, Object Oriented Programming, Circuits, Machine Learning, Algorithms

Skills

Programming   Experienced - **Python**   Proficient - TypeScript, C++, Java, Scala, SQL, C#   Novice - C, R, Assembly

Tools: Scikit-Learn, TypeScript, Pandas, NumPy, TSLearn, **AWS**, Apache Spark, **Git**, GitHub, BigQuery, Seaborn, Matplotlib

Topics: Data Structures, Algorithms, **Machine Learning**, Data Analysis, Time-Series Forecasting, Cloud Computing, Web Dev

Work Experience

Founding Software Engineer - Wattnest   April 2025 – Current
Berkeley SkyDeck backed climate-tech startup tackling smart load orchestration of Distributed Energy Resources (DERs)
- I designed a data storage pipeline (ETL /ELT) to handle 50gb of **raw telemetry data** for long term storage, cleaning, and feeding into optimization algorithms using Google Service Accounts, AWS IoT Core, IoT Rules, Lambda and S3.
- Designed and built stochastic optimization algorithms for accounting for realistic uncertainty in energy consumption, and price changes using Linear/Integer Programming (LP, MILP via PuLP) to improve **optimization results by 13%**
- Helped design then build a hardware prototype handling power conversion, low-level communication protocols, and then sending control commands to various heat pump water heaters and industrial equipment.

Software Engineering Intern - Nova Measuring Instruments   June 2025 – Sept 2025
I developed forward facing **C#/.NET/Python** software for Nova's semiconductor metrology tools used by global chipmakers.
- Prototyped kernel Principle Component Analysis (sklearn) algorithms for extracting signals from wafers for determining defects. This resulted in a **12% improvement** in throughput/data acquisition over standard PCA implementation on our product.
- Migrated **over 200** projects from deprecated StyleCop to Roslyn analyzers, **reducing +1400 warnings**, and creating quicker build times. This allowed us to unify quality standards and fully swap to Visual Studio 2019 without deprecated libraries.
- Delivered **2 software features** for external customers: automating wafer inspection recipes for data acquisition improving throughput by **25%**, and improved error logging by **50%** by creating a tool to unify error logs.

Software Engineering Co-op - Lawrence Berkeley National Laboratory   May 2023 – Oct 2024
Machine Learning Engineering internship where I developed **machine learning algorithms** for reducing **emissions** in buildings
- I served PG&E and SCE as a technical consultant on the Wattsaver pilot program for +1yr; developed load shifting optimization algorithms for water heaters that are currently deployed to **700 daily customers** in the bay area.
- Developed advanced control signal algorithms for HVAC and thermostat systems using scikit-learn to reduce peak electricity usage by **97%** and overall electricity costs for end customers by **29%**; worked with companies like Nest, Ecobee, and Daikin.
- Applied cross-correlation and Dynamic Time Warping algorithms to realign malfunctioning sensors in a deployed research project. This resulted in realigning live time-series data from **83 malfunctioning sensors** and a journal publication.
- Built data imputation tools using KNearest Neighbors, KShape, and heuristics (sklearn) for creating accurate baselines from smart thermostat data for M&V measurements. This tool was used by **3** industry **customers** and resulted in a publication
- Developed data analysis pipelines using SQL, Scala and Apache Spark to process over **3TB** of data using on-site resources

Personal Projects

Parliamentarian RAG-LLM Assistant for the UC Santa Cruz Student Government   suaparli.org
- Build an **LLM** to support me as Parliamentarian using Qdrant, OpenAI embeddings, and Python for regulation citations
- Swapped to using Lemma for automating the process of ingestion, storage, and memory of governance documents.

Research and Awards

IEEE DC Microgrid 2024 (A Power-Centric Digitally-Managed 48V Distribution Technology)   Co-Author
ACEEE 2024 (Using advanced M&V data to quantify the greenhouse gas impact…)   Co-Author
Department of Energy presentation at Oak Ridge National Laboratory (stor4build 2024)   Contributor
Data-driven approach for baseline construction in a demand flexibility future (IEPEC 2025)   Co-Author