Aadit Kannan

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Education

B.S. Mechanical Engineering, Minor in EECS · UC Berkeley *Expected May 2028*
- Current Coursework: Engin 29 (Manufacturing/Design), Math 53 (Multivariable Calc), Physics 7B (E&M)
- Prior Coursework: Engin 7 (Python/Matlab), Chem 1A, Physics 7A (Mechanics)

Santa Clara High School *Aug 2021 – Jun 2025*
- Relevant Coursework (AP + DE): Calc BC, Linear Algebra, Physics C, Chem, CSP, Physics 1, Stats, Research, Macro

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Skills

Languages & Frameworks: Python, Java, JavaScript/TypeScript, SQL, HTML/CSS, React, Next.js, Node.js, Tailwind
Libraries & Tools: Pandas, NumPy, Matplotlib, OpenCV, TensorFlow, PyTorch, Git, PostgreSQL, Supabase
Engineering & Design: Fusion360, Solidworks/PDM, FEA (Simscale/Fusion), CAD/CAM/CAE, XFLR5, Machining

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Experience

Undergraduate Researcher · Ramesh Lab *Jan 2026 – Present*
- Researching complex-oxide thin films ($BiFeO_3$) for next-gen memory via pulsed laser deposition
- Built PLD tracking system to log 30+ experiments, correlating growth parameters with XRD/AFM/PFM characterization; includes data explorer, camera-integrated positioning, and automated slide-deck parsing

Accumulator Mechanical Engineer · Formula Electric Berkeley *Sep 2025 – Present*
- Designed and manufactured the attic casing for the high-voltage accumulator (battery), implementing waterproofing, high-dielectric-strength insulation to manage the 588V pack, reducing attic mass by 18%

Deja Vu #13216 Hardware Lead & Zenith #20424 Captain · Robotics (FIRST) *Aug 2021 – Aug 2025*
- Designed 8 robots in 500+ part CAD assemblies, used FEA to optimize custom components, won Design Award (x3)
- Mentored 30+ members in Java and CAD, improving team functionality and leading teams to regional competitions
- For outreach, raised over $5000 across teams, launched an innovative parts exchange program, designed team websites

Student Leadership Committee · STEM Leadership Institute (SLI) *Aug 2019 – Aug 2025*
- Trained 120 middle school STEM students on Arduino for science fair projects
- Designed 3 mock competitions and mentored 2 FIRST Tech Challenge and 5 FIRST Lego League teams
- As part of a 6 year selective program, established career interests through 1800+ hours of STEM sessions and coursework
- Gained experience with CO2 laser cutter, CNC mill, 3D printer (FDM + SLA), CNC, and woodshop tools

Founder · Pear Volunteering *Aug 2023 – Aug 2025*
- Developed an app/website to connect 2000+ students, 20+ organizers, and school admin to facilitate volunteering
- Implemented secure webhook/CMS-integrated system for high-volume data handling and encrypted user communication

Mechanical Engineering Intern · Posha (Formerly Nymble) *Jun 2023 – Aug 2023*
- Repaired 20+ customer cooking robots by troubleshooting electrical and mechanical systems, and debugging

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Current Projects 🔗

Atlas SMR *2025 – Present*
- Developed site to evaluate SMR feasibility in rural areas, integrating site data and weighted scoring to prove usability
- Added hybrid SMR–solar modeling to visualize energy demand, environmental constraints, and overall system potential

Leitmotif · YCombinator x Google DeepMind Hackathon Winner *Mar 2026*
- Built real-time assistive audio system using Gemini vision + DeepMind Lyria, generating musical motifs that encode people and scene context for visually impaired users
- Implemented Node.js/TypeScript backend with PostgreSQL (pgvector) + Supabase for vision inference, motif retrieval, and audio generation; won hackathon, earning $5k in GCP credits

Inventry *2025 – Present*
- Developed website for FTC inventory tracking, utilizing AI invoice indexing and webscraping for 1000+ part catalogs
- Integrated part-lending service with incentives, imposed extensive privacy measures for user interaction and part market