

Sumedh Kothari

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EDUCATION

Georgia Institute of Technology

Expected May 2028

B.S. in College of Engineering

- **Coursework:** Computing for Engineers; Advanced Data Structures, Embedded Systems, and Networking; Multivariable Calculus; Linear Algebra; Intro Physics 1; Intro Physics 2
- **Honors:** Symposium of Rising Scholars Presenter, Herman Peters Award, Scout of the Year Award

EXPERIENCE

Georgia Tech Renewable Bioproducts Institute | Tong Laboratory

Atlanta, GA

Research Intern

August 2025 – Present

- Used Python, NumPy/Pandas libraries to apply Bayesian statistical modeling to optimize lignin valorization reaction conditions
- Utilized NMR, FTIR, and DFT modeling data to characterize value-added chemicals
- Completed comprehensive literature reviews on aromatic compound synthesis, collaborating with research team to write manuscript for publication

Hydrogen Engineering Research Consortium

Los Angeles, CA

Simulation Intern

August 2024 – February 2025

- Used MATLAB, dimensionless differential equations to model species' concentrations in eutrophic freshwater ecosystem
- Employed sustainability over sets calculation to determine equilibria, stability of environment; co-authored research paper on environmental systems modeling under UCLA faculty mentorship

PROJECTS

ChemE Cube | Georgia Tech

Atlanta, GA

Design Engineer

August 2025 - Present

- Used AutoCAD to design high surface area Kelvin lattice structure for 1 cu. ft. Direct Air Capture Plant
- Analyzed CO₂ capture data with Python to determine optimal amine sorbent concentrations and solvent chemistry
- Prepared demo, technical documentation, and presentation for judging panel

AiApply - AI Job Applier

Atlanta, GA

Developer

October 2025

- Developed full-stack AI-powered internship application platform using Python, Selenium WebDriver, HTML, and JavaScript to automate end-to-end job search workflows, including resume optimization, cover letter generation, and programmatic application submission on Handshake
- Implemented Selenium-based automation to extract recruiter profiles from filtered company searches and deliver personalized direct messages at scale, increasing outreach efficiency and response rates
- Engineered web scraping algorithms using Python to identify target companies based on location and industry parameters, then automated tailored email outreach highlighting candidate skillsets parsed from resume data

GreenGrade - Gemini API Developer Competition

Los Angeles, CA

Project Lead

July 2024 - August 2025

- Directed 20-person UCLA team to architect and implement a fuzzy logic-driven Sustainability Interval Index calculator with scalable data integration pipelines
- Developed and deployed *GreenGrade* (Flutter/C++), embedding SII computational model and automating sustainability analytics for 175 mining firms through Gemini API

Sustainable Farming Crop Growth Predictor

Remote

Developer

June 2022 – July 2022

- Implemented AI/ML models (MLP, linear regression, KNN, decision trees) in Python with NumPy/Pandas libraries to analyze crop growth from 30+ bacterial strain features
- Optimized predictive analytics pipeline to identify high-performing farms by soil type, achieving 160% higher accuracy over random baseline

SKILLS

- **Technical:** Python, Java, Data analysis (Excel, MATLAB), Environmental Modeling
- **Communication:** Technical Writing, Multilingual (English, Hindi, Spanish)