

# Sumedh Kothari

skothari67@gatech.edu | linkedin.com/in/sumedh-kothari

## EDUCATION

### Georgia Institute of Technology B.S. in College of Engineering

Expected May 2028

- **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 *Research Intern*

Atlanta, GA

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 *Simulation Intern*

Los Angeles, CA

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 *Design Engineer*

Atlanta, GA

August 2025 - Present

- Used AutoCAD to design high surface area Kelvin lattice structure for 1 cu. ft. Direct Air Capture Plant
- Analyzed CO<sub>2</sub> 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 *Developer*

Atlanta, GA

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 *Project Lead*

Los Angeles, CA

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 *Developer*

Remote

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)