# Adhitya Thirumala

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# EDUCATION

## University of Illinois Urbana-Champaign

2024-Present Major: Computer Science + Linguistics

Fox Chapel Area High School

2020-2024

GPA: 4.32/4.0, SAT: 1550 (790 Math, 760 EBRW)

#### Relevant High School Coursework

Important non-AP Classes: Linear Algebra, Data Structures and Algorithms

AP Classes: AP Computer Science Principles(5), AP Computer Science A(5), AP World History(5), AP US History(5), AP Calculus AB(5), AP Calculus BC(5), AP Chemistry, AP Physics C: Electricity and Magnetism(5), AP English Language and Composition(4), AP Statistics, AP Physics C: Mechanics (4), AP US Government and Politics (5), AP English Literature and Composition

Academic Awards: AP Scholar with Distinction (2023), National Merit Qualifying Test Finalist (2023)

#### SKILLS

Languages: Python, Java, HTML, LATEX

Tools: Git/GitHub, Bash Shell, VS Code, Huggingface, Linux, GPT-3 Libraries: pandas, NumPy, Matplotlib, Tensorflow, pyTorch, Swing(Java)

## Projects

# Clickbait Classification and Spoiling Using Natural Language Processing

October 2022 - May 2023

- Developed natural language processing models to classify and spoil clickbait
- Utilized Large Language Models and prompt engineering to generate spoilers
- Results submitted to The 17th International Workshop on Semantic Evaluation: Toronto, Canada 2023
- Published to arXiv: Link
- Mentored by Dr. Elisa Ferracane

## Extractive Question Answering on Queries in Hindi and Tamil

October 2021 - May 2022

September 2020 - May 2021

- Developed Extractive Question Answering (QA) models in Tamil and Hindi with public dataset
- Improved performance of such models as compared to gold-standard

• Utilized openCV and Tensorflow to create machine learning models

- Modified RoBERTa tokenizer to accept input in Hindi and Tamil to minimize need for data and training
- Published to arXiv: Link
- Mentored by Dr. Elisa Ferracane

#### S.W.I.F.T.: Surveillance With Intelligent Field Technology • Created machine learning classifier that can detect the presence of certain bird species (such as chimney swifts) in an image

- May 2024 Java Jackpot Fox Den Casino • Created Casino Game for Data Structures and Algorithms Class with features of Baccarat, Persistent Scoreboard, and HTML
  - Client utilizing Random.org API for true-random Casino mechanics.

Utilized Java and Swing to make the application from scratch doing both front-end and back-end development

- Utilized Maven for package management and hosted source code on Github here
- Presented project in front of district administration as part of in-classroom enrichment opportunity

#### Work Experience

## Kumon Fox Chapel | Assistant for Center Operation

2021 - 2024

Successfully improved the self-initiated learning abilities of students (Pre K-9) in language arts & math (arithmetic-calculus). Graded students' daily work and tutored students through concepts. Entered student homework data into online computer system. Coordinated work with other employees to maximise efficiency in center.

# Extracurricular Activities

Forensics and Model UN Club | '22-'23: Director of Debate, '23-'24: President

2020 - Present

Intensively researched and debated on the national circuit without support from school-led program. Coached and taught novice students who qualified for state championships. Conducted after school practice sessions to improve performance in tournaments. Judged local novice tournaments. Created club-branded merchandise. Spearheaded fundraising efforts for competition travel.

# Promoted science fair opportunities throughout the high school, increased state participation in PJAS by 20%. Mentored younger

Science Fair Club | '22-'24: President

2017 - Present

students and taught presentation skills. Volunteered at an elementary school science fair to teach science concepts through basic demonstrations and to judge projects.

### AI Catalyst Conversations | Founder, President Founded and promoted an organization that promotes AI through webinars featuring industry experts. Created and led club

August 2023 - Present

members throughout multiple chapters at various local schools.

# Volunteer Activities

Mini Golf Fundraiser | Founder, Leader of Fundraising Activities 2021: Organized a Mini Golf fundraiser for Indian CoVID relief. Raised \$2500, which was donated to EKAM ® Foundation for

Defibrillator which can be used to help those experiencing sudden cardiac arrest.

2021 - Present

purchase of oxygen, and infant warmers given to primary health centers in South India. 2022: Organized a Mini Golf fundraiser for Bethlehem Haven, a local women's shelter, whose mission is to provide a continuum of care for homeless women that leads toward self-sufficiency. Raised \$2000, towards the purchase of an Automated External

2023: Organized a Mini Golf fundraiser, with Moonyoung Hwang, for Bethlehem Haven. Raised \$2000 for the renovation of their main residence, funds will be used for furnishing a room for homeless women to stay during their path to self-sufficiency.

Audubon Naturalist in Training (A.N.T.) | Training Camp Counselor, Audubon Society of Western PA Counselor for youth nature camp, led nature walks, crafts & games to teach children from ages 5-12 about local flora and fauna. Volunteered at nature shop, assisted as cashier and in daily operations. Collected bird presence data throughout the nature preserve by both visual and aural identification, visual data was submitted to Project Feederwatch.

# Research Awards

Pennsylvania Junior Academy of Science Regional and State First Place 2021	- 2023
Pittsburgh Regional Science and Engineering Fair (PRSEF) Scholarship Award: Slippery Rock University	2023
26th Annual Senior Division Carnegie Science Award at PRSEF	2022
Associate Scientist Award at PRSEF	2022
Junior Scientist Award at PRSEF	2021
Broadcom MASTERS Top 300 Selection	2020
Summer Debate Workshop	

# University of Michigan Debate Institute Seven Week Program

2023

Seven week summer workshop for Top Senior National Debaters. Significantly improved research skills, strategic vision & speaking ability through intensive lectures, classes & practice debates on the topic: The United States federal government should substantially increase fiscal redistribution in the United States by adopting a federal jobs guarantee, expanding Social Security, and/or providing a basic income.

## University of Michigan Debate Institute Classic Plus Program Four week summer workshop. Significantly improved research skills, strategic vision & speaking ability through intensive lectures,

Presidential Volunteer Service Bronze Award

Presidential Volunteer Service Gold Award

2022

2022 2021

classes & practice debates on the topic: The United States federal government should substantially increase its security cooperation with the North Atlantic Treaty Organization in one or more of the following areas: artificial intelligence, biotechnology, cybersecurity.

# Debate Awards

Outstanding Distinction in NSDA Honor Society (Top 0.4% USA, #1 PA Policy Debate)	2023
#91 out of 1350 teams NDCA Baker Leaderboard	2023
National Catholic Forensics League Grand Nationals Octafinalist	2023
National Catholic Forensics League Grand Nationals Double-Octafinalist (Top 32)	2022
PA State Champion Policy Debate	2023, 2024
PA State Quarterfinalist Policy Debate	2022
Volunteer Awards	