## **LUCA BENGA**

(929) 375-6115, lucabenga@hunterschools.org

# **EDUCATION**

## Hunter College High School, New York, NY

Class of 2026

- Honors Courses: Life Sciences, Biology, Chemistry, Physics, Computer Science, English I-IV, French I-III, Global Studies I-IV, US History I-II, 20th Century History
- Extended Honors Courses: Mathematics I-IV
- AP Courses (Completed): Chemistry
- AP Courses (In Progress): Calculus BC, Statistics, Physics E&M, Macroeconomics, Microeconomics

#### **Extracurricular Statistics**

2024 - 2025

 Studying data science and statistics using R and R Studio under guidance of Prof. Dana Sylvan at Hunter CUNY (part of research project)

# RESEARCH EXPERIENCE

"Mathematical models for speed climbing applied to data collected on competitors in recent World Cup events"

May 2024 - June 2025

- Initiated one of the first mathematical/statistical analyses of speed climbing, under the guidance of Prof Dana Sylvan at CUNY Hunter College.
- The work was presented at the MathSport International Conference in Luxembourg, June 2025.

### Science Research Seminar

September 2023-June 2025

- Participated in highly selective high school program centered around science research
- Visited research labs in NYC metro area to gain experience in methods and techniques used in science experiments

## **OpenBCI Discovery Program – Independent research**

April 2025-present

 Initiated research using brain-computer interface device to measure and develop understanding of brain activity during training and competing

## **EXTRACURRICULAR EXPERIENCE AND HONORS**

# American Computer Science League

2021 - present

- Participated in ACSL annual programming and computer science competitions. The series tests knowledge
  of fundamental concepts in computer science, ranging from Number Systems to Boolean Algebra to Digital
  Electronics. It also includes problems to solve by programming using Python, C++ or Java.
- Qualified for Finals in Junior Division 2022 and 2023 and Intermediate Division 2024 and 2025 (with perfect 48 points).

### **American Math Competition**

2021- present

- Participated in American Math Competition series (AMC8, AMC 10, AMC 12) annually since 7<sup>th</sup> grade.
- Top 10 % score in AMC10 2022-2023 and 2023-2024.
- Qualified to AMC12 American Invitational Marth Exam (AIME) 2024-2025.

### **Downtown Mathematics Invitational**

2024

- Competitive math team contest for all New York City high schools, hosted by Stuyvesant High School.
- Member of Hunter High School 3 person math team. 1<sup>st</sup> place winner out of over 50 teams.

#### **US National Chemistry Olympiad**

2025

Achieved a score of 42 (out of 60) on USNCO.

#### **National French Contest / Grand Concours**

2023 - 2024

• Silver medal 2023 (9th grade) and Silver medal 2024 (10th grade)

# **COMPETITIVE ATHLETICS AND AWARDS**

## **Athletics - Competitive Climbing**

2019-present

- Over 5 years of elite level competitive climbing. Qualified to US National Championship in all three disciplines (bouldering, lead and speed) multiple times since 2019. Top 25 nationally in bouldering and lead. Multiple wins and podiums at local and regional climbing competitions.
- Member of Method Climbing Team, Newark, NJ, winner of overall USA National Championship title in 2023.
- 3<sup>rd</sup> place, U18, Romanian National Bouldering Cup, November 2024.

## LEADERSHIP AND COMMUNITY SERVICE

## Volunteer work - NYC Climbing Collective

2023 - 2024

- Volunteered with New York City Climbing Collective, a non-profit dedicated to promoting equity in climbing for all people in the NYC metropolitan area.
- Taught weekly climbing classes to middle-school children from underserved communities for one year.

## **Volunteer Work - Math Tutoring**

2022 - present

• Tutored math to younger Hunter students, as part of the school's Internal Tutoring Math Service. Also a member of Math Mastery for All, designing and planning math lessons for middle and high schoolers in underserved NYC areas.

### **Hunter School Climbing Club**

2023-present

- Founder and President.
- Chartered and set up Hunter School Climbing Club, with the aim of introducing schoolmates to the sport.
   Negotiated discount rates with various gyms around NYC, making trips more accessible. The club has over 100 members from a large variety of backgrounds.

## ADDITIONAL SKILLS

- Coding: Advanced C++. Intermediate R, R Studio and Python.
- Experience with: PCR, Gel Electrophoresis, micropipetting, chromatography, distillation, building lab reports, and documenting methodology of experiments.
- Fluent English and Romanian. Proficient in French