Giacomo Pugliese

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Portfolio: https://giacomopugliese.github.io/PortfolioSite/index.html

EDUCATION

Bergen County Academies // 4.0 GPA // 1560 SAT

Relevant Coursework: AP Computer Science A, Front End Web Design, SQL, Systems Programming (Assembly, C programming, Sockets & Threading), Machine Learning, Web Apps with Databases, Harvard CS50

Languages: Typescript, Javascript, HTML, CSS, MySql, Python, Java

ACHIEVEMENTS

- Gold Division in United States Computing Olympiad (Top 700 Worldwide)
- 1st place in New Jersey for HOSA Medical Innovation
  - Designed a machine learning integrated tool for EMS with computer vision and intelligent diagnostics
- 4th place nationally for Anatomy & Physiology at Brown Science Olympiad
- 6th place nationally for Cell Biology at Brown Science Olympiad

EXTRACURRICULARS

Research Intern at Dantas Lab at Washington University *2022 - Present*

- Optimizing the implementation of PARFuMS, a computationally based pipeline for the assembly of short-read sequence data from functional selections
- Working to utilize the model in a high-throughput functional metagenomic approach to characterize exchange of antibiotic resistance genes between environmental bacteria and clinical pathogens

Code for Charity *2022 - Present*

- Lead developer of the HACA project, or Haitian Alliance for Community Action, and worked with developers to update their website UI and increase mobile responsiveness
- Coached new members through workshops involving introductory coverage of HTML, CSS, and JavaScript to design web applications

Emergency Medical Technician *2022 - Present*

- Completed 220 hours of coursework at Bergen County EMS Training Center involving cardiac, airway, medical and traumatic emergencies, and volunteered in the ER department of Hackensack hospital
- Worked with patients presenting with various conditions, and employed skills in patient assessment, resuscitation, oxygenation, drug administration, splinting, and more

Provita Pharmaceuticals *2022 - Present*

- Project lead of Scaffold Aid at Provita Pharmaceuticals, the only student run pharmaceutical company in the world
- Designing a functional matrix capable of three dimensional culture and differentiation of preosteoblasts for in vivo bone tissue engineering techniques
- Presented work to scientists and officials at Rutgers Medical School, Englewood Hospital, and FDA

Surgical Intern at Englewood Dept. of Vascular Surgery *2022*

- Operated on live mice and successfully performed procedures including a splenectomy and carotid cannulation using microligation, suturing, and oral gavage techniques
- Authored a paper on establishment of a successful experimental model to study the effects of postoperative ileus, evaluated on metrics of gastric emptying and intestinal transit data

Public Health Intern at Leadership Initiatives *2021*

- Founded a new COVID awareness campaign within the organization to spread information about the disease and preventative strategies
- Raised $1300 towards the campaign through fundraising, and collaborated with healthcare professionals in Bauchi, Nigeria