Juan F. Atehortúa

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EDUCATION

BOWDOIN COLLEGE
BA in Mathematics, Computer Science
May 2024 | Brunswick, ME
Cum. GPA: 3.912 / 4.0
Math Major GPA: 4.0 / 4.0
CS Major GPA: 4.0/4.0

RONALD REAGAN DORAL SENIOR HIGH
Grad. May 2020| Doral, FL
Immigrated from Colombia in 11th grade.
Chemistry Club Officer, Mu Alpha Theta tutor.
Graduated cum laude with 6 AP, 2 AS level, and 3 dual enrollment credits.

LINKS

Github:// **atehortuajf**
LinkedIn:// **atehortuajf**

COURSEWORK

UNDERGRADUATE
Intro. to Analysis (Fall 2021)
Intro. to Group Theory (Fall 2021)
Intro. to Math Reasoning
Computational Geometry
Foundations of Computer Systems
Algorithms
Linear Algebra
Data Structures
Multivariate Calculus
Intro. to Microeconomics

HIGH SCHOOL
AP Calculus BC
AP Computer Science A
AS level Chemistry
AP Macroeconomics

SKILLS

PROGRAMMING
Java • C • Python • Julia • C++ • MATLAB • Jupyter Notebooks • LaTeX

TUTORING
K-12 Math • Computer Science • HS Chemistry • Spanish • Standardized Testing (1510 SAT)

MISCELLANEOUS
Problem solving • Abstract thinking • Interpersonal communication • Troubleshooting • Basic networking

EXPERIENCE

VARSITY TUTORS | K-12 Tutor
Jun 2021 - Present | Boston, MA
- Instant (virtual) tutoring and in-person tutoring.

INDEPENDENT | K-12 Tutor
Sep 2019 - Mar 2020 | Doral, FL
- Worked both privately and as community service with my high school tutoring.

WHIRLYBALL | General Employee
June 2017 - Sept 2017 | Plano, TX
- Handling of customer parties.
- Cleaning and maintaining arcade games and bumper karts

RESEARCH

SUMMER GEOMETRY INSTITUTE @ MIT | Research Fellow
July 2021 – Aug 2021 | Boston, MA
As a research fellow for the Summer Geometry Institute I had the pleasure to learn a lot of geometry processing techniques (differential geometry, optimization, numerical methods, etc.) which were applied to a myriad of interesting projects from professors and professionals which me and other fellows from around the globe worked on.
- Under the mentorship of Prof. Marcel Campen from Osnabrück University, we worked to extend, generalize, and improve an algorithm for the generation of higher-order triangle meshes that perfectly discretizes a curved 2D domain without geometric error.
- Under the mentorship of Prof. Bommes and Prof. Beaufort from the University of Bern, we improved upon a plugin designed within the OpenFlipper framework to improve the quality of quadrilateral surface meshes in the plane. After SGI, we want to generalize the implementation for surfaces in 3D and hexahedral meshes.
- Under the mentorship of Prof. Snavely from Cornell University, we are reconstructing a 3D point cloud of the moon based on structure from motion from flickr images of . From this, we used novel shape-fitting techniques (RANSAC) to fit an oblate spheroid to the point cloud.

AWARDS

2021	Maine	Colby College DataFest Honorable Mention
2020	National	Questbridge National Match Scholar
2020	National	AP Scholar with Distinction
2019	National	NHRP National Hispanic Scholar