

Brian Hernandez

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EDUCATION

CUNY Macaulay Honors College at Hunter College
B.A. Computer Science
GPA: 3.5 - Cum Laude

New York, NY
Jun '18

EXPERIENCE

JPMorgan Chase & Co
Software Engineer

Jul '18 – Present

- Develop scalable microservices to support new features in firm's heavily utilized sales app.
- Automate analytics reports and tools used in various business analyst workflows.
- Maintain and optimize ETL data pipeline for fixed income instruments, including 5M+ bonds.
- Led initiative to create infrastructure for real-time data feed of repurchase agreements.
- Coordinated and executed several production level releases of the team's software.

Microsoft Research Lab
Data Science Scholar

Jun '18 – Aug '18

- Conducted extensive quantitative investigation of NYC subway system reliability in collaboration with senior researchers and other undergraduate students.
- Demonstrated the trade-off in reliability offered by transferring to express trains or taxis.
- Processed 23M+ data points of 1M+ subway trips into graph-based model of the subway.
- Generated distributions of hourly expected wait times across all 400+ subway stations.
- Estimated the relationship of socioeconomic factors and commute times.

Hunter College Computer Vision Lab
Research Assistant

Sep '17 – Jan '18

- Aided novel research seeking to take advantage of the angle and position of missing data points in 3D LIDAR scans to improve the performance of vehicle detection algorithms.
- Devised an efficient method to determine if point clouds reside within bounding boxes.
- Helped with data acquisition and subsequent cleaning of LIDAR data of NYC streets.

Verizon Media
Software Developer Intern

Jun '17 – Aug '17

- Prototyped proof of concepts that leveraged existing internal media-tech brands.
- Designed a patent-pending NLP pipeline for image-based content generation.
- Pitched and implemented an automated process that would leverage image-based content generation to help internal media brands appeal to a younger generation.

PUBLICATIONS

Microsoft Research Lab

New York, NY

Exploring the Reliability of the NYC Subway System

Conferences: 2018 Code @ MIT, 2019 ACM Richard Tapia Conference, 2019 STARS

VOLUNTEERING

American Society of Mechanical Engineers

Sep '19 – Present

Data Visualization Developer / Experienced Technologist

- Build out a data visualization dashboard to highlight the organization's global impact.
- Evaluate and recommend technology decisions for the volunteer development team.
- Provide guidance and assistance to junior developers throughout the project.
- Facilitate communication between the organization and the team.

Start Small Think Big

Sep '18 – Jun '19

Web Developer

- Created web application to manage the organization's operational tasks.
- Gathered requirements from executive board and incorporated feedback into product.
- Proposed the technical implementation plan that was ultimately chosen for the project.

WebServes

Mar '16 – Jan '17

Web Developer

- Worked closely with clients and delivered various website solutions using WordPress.
- Revamped the homepage of the organization to help with their outreach efforts.

LEADERSHIP

JPMorgan Chase & Co

Jan '19 – Present

MTC Entry-Level Recruiting Council Founding Member

- Organize recruiting efforts in coordination with the firm's Manhattan Tech Center (MTC).
- Define strategy to increase the number of applicants from underrepresented colleges.

SEP Council Founding Member

- Organize all events for the Manhattan-based Software Engineer Program (SEP) analysts.
- Represent and voice the concerns of SEP analysts in recurring meetings with management.

SEP Technology Mentor

- Assist new analysts in adjusting to full-time work by sharing personal experience at the firm.
- Act as a formal touchpoint for mentees with weekly one-on-one meetings.

CUNYCodes

Jan '17 – Apr '17

Team Lead / Scrum Master

- Led a team of CUNY students to deliver a fully featured android application in a 4-month period as a part of the CUNYCodes technical skill development program.
- Conducted sprint planning meetings and retrospectives to improve team productivity.

HONORS & AWARDS

- **3rd Place Undergraduate Poster Award** – 2019 ACM Richard Tapia Conference
- **Special Recognition Student** – 2018 Hunter College Graduation Ceremony
- **Hackathon Winner** – 2015 TechCrunch Disrupt NY Hackathon
- **Dean's List** – Hunter College (6 semesters)
- **Full merit scholarship** – CUNY Macaulay Honors College at Hunter College

PROJECTS

BriHeart

Data visualization and analysis of 1M+ data points on personal heart rate and sleep patterns.

BD for AD

Exploration of using different databases to optimize the analysis and querying of genomic data.

Yelp Me Out

Time series analysis of Yelp reviews of restaurants with respect to their location.

Lit Subway

NYC subway map showing the status of different train lines using LEDs and a Raspberry Pi 3.

Cappies

Online multiplayer video game where players can socialize and collect items in a virtual world.

Mini Chef

Amazon Alexa application to enable a purely voice-controlled searching and dictation of recipes.

COURSEWORK

Computer Science: Big Data • Data Analysis • Database Management • Computer Vision • Computer Networking • Embedded Systems • Android Development

Math / Stat: Calculus III • Linear Algebra • Differential Equations • Discrete Probability • Probability Theory • Mathematical Proofs

Urban Studies: Arts in NYC • People of NYC • Science & Technology in NYC • Shaping the Future of NYC

SKILLS

Programming: Python (Flask) • Java (SpringBoot) • C++ • JavaScript • HTML/CSS

Data Science: R • Linear regression • Machine learning • Distributed computation

Other: Video editing • Animation • Graphic design

ACTIVITIES

JPMorgan Chase & Co

- Recruiting Volunteer
- Hackathon Volunteer

CUNY Macaulay Honors College at Hunter College

- Filipino Cultural Club Member
- Macaulay Data Science Fellow

Other

- American Heart Association Member
- NYC Riders Alliance Member
- Indie Game Developer