Bryant Curto

Curriculum Vitae

Education

2020–present **MS Computer Science**, *University of Waterloo (UW)*, Waterloo, ON.
Supervisor: Martin Karsten
95.75/100.00 GPA

2014–2018 **BA Computer Science with Honors & BA Mathematics**, *New York University (NYU)*, New York, NY.
3.92/4.00 GPA, Summa Cum Laude, Phi Beta Kappa

Research Experience

2020–present **UW Research Assistant**, *Advisor: Martin Karsten*, Waterloo, ON.
Devise, implement, and evaluate methods for improving cache locality and utilization in thread-per-session applications using Fred/Libfibre, a user-level M:N threading runtime.

2017–2018 **NYU Senior Honors Thesis**, *Advisor: Christopher Mitchell*, New York, NY.
Project Title: Ghosting ASLR: A Spectre Extension
Designed, implemented, and evaluated a novel approach for defeating address space layout randomization by leveraging the Spectre microprocessor vulnerability. Won best presentation award at NYU College of Arts and Science 44th Undergraduate Research Conference.

Summer 2016 **Undergraduate Research Fellow**, *Advisor: Jinyang Li*, New York, NY.
Implemented and evaluated a novel database storage structure to reduce the latency of accesses performed in parallel with database entry migration.

Summer 2015 **Undergraduate Research Fellow**, *Advisor: Chee Yap*, New York, NY.
Designed and implemented a system for testing and visualizing Soft Subdivision Search algorithms in robotic motion planning. System was later presented in a publication entitled *Path Planning for Simple Robots using Soft Subdivision Search* for which I was acknowledged.

Industry Experience

2018–2020 **Back-End Research & Development Engineer**, *Geopipe, Inc.*, New York, NY.

- Managed and developed the generation of virtual model products–the Earth's digital twin.
- Implemented and tested research algorithms to improve the quality and accuracy of product models. Work was funded by the National Science Foundation's *Small Business Innovation Research Program: Phase II* grant.
- Supervised the day-to-day work of undergraduate interns during the summers of 2018, 2019, and 2020.

The company has pentupled in size since joining and have earned a multi-million dollar evaluation.

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Summer 2017, Winter 2018 **Back-End Research & Development Assistant**, *Geopipe, Inc.*, New York, NY.

- Managed and developed the generation of virtual model products.
- Assisted in the implementation and testing of research algorithms to improve the quality and accuracy of product models. Work was funded by the National Science Foundation's *Small Business Innovation Research Program: Phase I* grant.

Teaching Experience

Spring 2021 **Teaching Assistant – CS456**, *University of Waterloo*, Waterloo, ON.
evaluation: n/a

Winter 2021 **Teaching Assistant – CS116**, *University of Waterloo*, Waterloo, ON.
evaluation: 30/30

Summer 2018 **Private Tutor – Linear Algebra and Computer Science**, New York, NY.

Awards

2018 **Graduate Excellence Award in Computer Science**.
UW Cheriton School of Computer Science

2018 **Best in Panel Presentation Award: Computer Science, Mathematics for *Ghosting ASLR: A Spectre Extension***.
NYU College of Arts and Science 44th Annual Research Conference

2018 **Award for Scholarship: Academic Excellence & Achievement in Science**.
NYU College of Arts and Science

2018 **Computer Science Prize: Outstanding Performance**.
NYU College of Arts and Science

2017 **Computer Science Prize: Most Promising Student in the Jr. Year**.
NYU College of Arts and Science

2017 **Dean's Undergraduate Research Fund Award**.
NYU College of Arts and Science

2015–2018 **Louis Baron Scholarship Award for Mathematics**.
NYU College of Arts and Science

2014–2017 **Dean's List**.
NYU College of Arts and Science

Skills

PLs: C++ ■■■■■ | C ■■■■■ | Python ■■■■□ | Bash ■■■■□

OSes: Linux ■■■■□ | MacOS ■■■■□

Tools: GDB/LLDB ■■■■■ | Git ■■■■■

Languages: English ■■■■■ | Korean ■□□□□

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