

# James Bruska

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## PROFESSIONAL EXPERIENCE

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### Software Engineer

INFICON

June 2018 – Present

Syracuse, NY

Research, design, implement, and support new GC/MS system  
Designed and implemented a GUI based binary configuration editor  
Reverse engineered acquired competitor code

### VM Maintainer and Lab Member

Clarkson Open Source Institute

September 2014 – Present

Potsdam, NY

Lead, participate, and sponsor events that occur throughout the year

### Research Assistant

Clarkson University

July 2014 – May 2018

Potsdam, NY

Researched and implemented multiple computer security and process scheduling mechanisms

### Software Engineering Intern

Intelligent Automation Inc.

May 2016 – August 2016

Rome, NY

Worked on secure micro-kernel development and performed radio testing

## RESEARCH

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### Publications

- C. Woralet, J. Bruska, C. Liu, and L. Yan, "High Frequency Performance Monitoring via Architectural Event Measurement," October 2020, IISWC '20
- G. Torres, Z. Yang, Z. Blasingame, J. Bruska, and C. Liu. 2019, "Detecting Non-Control-Flow Hijacking Attack Using Contextual Execution Information," June 2019, HASP '19
- C. Liu, Z. Yang, Z. Blasingame, G. Torres, and J. Bruska. 2018, "Detecting Data Exploits Using Low-level Hardware Information: A Short Time Series Approach," June 2018, RESEC '18
- J. Bruska, Z. Blasingame, and C.Liu, "Verification of Openssl version via hardware performance counters," April 2017, SPIE '17

### Patents

Information can be provided upon request

## LEADERSHIP AND TEACHING

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**Official Intern Mentor:** INFICON

June 2020 – Present

**Alumni Mentor:** Clarkson Honors Program

October 2018 – Present

**Vice President:** Clarkson University Golden Knotes (A Capella Group)

May 2016 – May 2018

**Vice President:** Clarkson ACM (Association for Computing Machinery)

May 2015 – May 2018

**Teaching Assistant:** Microprocessors

January 2017 – May 2017

**Teaching Assistant:** Introduction to Computer Science I and II

January 2014 – May 2015

**Snowboarding Instructor:** Titus Mountain Ski Center

November 2014 – March 2018

## SKILLS AND ABILITIES

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### Programming Languages

Proficient: *C, C++, Python, Bash, VHDL*

Used: *Java, SQL, Assembly (x86 and HCS12), MATLAB, R, Rust, Haskell, Racket/Scheme, Prolog, HTML, CSS, JavaScript, BASIC, and Scratch*

### Technical Knowledge

Tools: *Linux, Virtual Machines, Git, AutoDesk Inventor, Microsoft Windows, Microsoft Office*

Frameworks: *Android App Development, Kernel Development, OpenCV, OpenSSL, Qt*

## EDUCATION

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**Le Moyne College** | 4.00/4.00

June 2020 – Present

Interesting Psychology Courses (ex: Positive Psychology)

**Clarkson University** | 3.94/4.00

July 2014 – May 2018

BS in Computer Engineering and Minor in Math with Honors

BS in Computer Science