Peter J. Russell

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EDUCATION

Princeton University, Major: *Electrical Engineering* 9/15 - 6/19
Concentration**:** *Security and Privacy* | CUM GPA: 3.7; Department GPA: 3.7

- Certificate Candidate/Minors*: Computer Science, Robotics & Intelligent Systems*
- **Scholarships and Awards:** *First Place*: Google Games NYC 2018; *Semifinalist, Best Presentation*: Columbia Univ. SIPA Cyber 9/12 Student Challenge; Hispanic Scholarship Fund Winner; National Merit Finalist; Intel Science Talent Search Semifinalist

PROFESSIONAL EXPERIENCE

Booz Allen Hamilton **Washington, DC; Boston, MA**
Cloud Security Architecture Intern, 5 person team 6/18 - 8/18

- Designed reference architecture for cloud security services focused on visibility, maintenance and management based on industry-specific threat modeling and compliance requirements
- Researched cloud threat landscape, identified SecOps Center shortcomings in Fortune 100 clients
- Developed go-to-market strategy given current challenges facing Financial Services, Pharma, and Oil & Gas clients, supporting fastest growing business segment in the firm

IoT Systems Security Engineering Intern, 5 person team 6/17 - 8/17

- Implemented Linux VM with seL4 microkernel on Nvidia Tegra for use as secure Industrial Internet of Things (IIoT) control platform; ported temp, humidity sensor applications to seL4 system
- Developed and executed pen-testing strategy given analysis of National Vulnerabilities Database, reduced attack surface by 100%, covering 2,125 kernel vulnerabilities affecting product lifecycle
- Presented to senior leaders on IIoT market, product MVP/use cases, and development roadmap

Princeton Lightwave Communications Research Laboratory **Princeton, NJ**
Research Assistant, "Photonic Neuron" neuromorphic optical computing project 6/16 - present

- Designed/simulated neuromorphic Si-photonic platform for ultrafast, high-quality pseudo-random bit generation for cryptography applications, with 100,000x speedup over conventional methods
- Simulated saturable absorber laser dynamics and RF circuits in PICWave and LTSpice
- Only EE student in class year selected to speak at Princeton Research Day 2018

Gartner, Inc **Stamford, CT**
UX COE, Strategic Technology Group 5/15 - 8/15

ORGANIZATIONS

Princeton Autonomous Vehicles Engineering (PAVE) 12/15 - present
President of a 35-student team with ~$20K in assets, utilizing a Ford Fusion automobile for projects in AI, computer vision, ROS programming, steering hacking, and vehicular cyber security,

- Hacked power steering system with spoofed signals from Arduino microprocessors generated with C, ATMEL Assembly, and built customized discrete circuits for current and voltage modulation
- Re-structured 10-person AI team focusing on vision algorithms in low-cost (sub-$100) systems
- Launched 5-person security team researching network and perception algorithms attacks in CAV's
- Competed in the Udacity-Didi Self Driving Car Challenge and presented to Ford Motor Company

OpenLoop Alliance, Princeton Hyperloop 9/15 - 1/17
Chapter Team Leader for Electrical Subsystem, Battery & Communications Team; *Chapter Treasurer*
One of six team leaders from six global universities comprised of 85 grad and undergrad students

- Packaged commercial battery cells, communications hardware in prototype pod design
- Presented at Design Weekend 2016, selected by SpaceX to for Competition Weekend 2017

Princeton University Rock Ensemble (PURE) 9/15 - present
Tenor Saxophonist/Treasurer for ensemble rock band with 30 song playlist

- Manage $8K in assets and in $5K annual revenue. Grew revenue 250% over 2.5 years

PROGRAMMING LANGUAGES AND SKILLS

- **Programming**: Python, C, Java, Assembly (x86/ATMEL/ARM), Verilog HDL, MATLAB, Unix/Bash
- **Hardware:** Arduino, Raspberry Pi, Nvidia Jetson | **Software***:* Excel, Powerpoint, Tableau
- **Skills**: Information/network security, penetration testing, networking, security architecture/design, A/D circuit design and analysis, digital forensics, cryptography, analytics, machine learning