

# Chase Kanipe

University of Maryland - Bachelor of Science (2021) - GPA 3.24  
Primary Major - Computer Science (*Cyber specialization*)  
Secondary Major - Physics

Certification - **OSCP** (*Offensive Security Certified Professional*)

## Experience

### Research Assistant — UMD Autonomous Unmanned Systems

June 2018 - August 2018

Worked under Dr. Derrick Yeo through F.I.R.E. at UMD with visualizing security vulnerabilities in the DSRC wireless protocol (C, Python)

### Software Development Intern — The Precision Alliance

June 2017 - August 2017 and June 2015 - August 2015

Database and web design for over 2750 types of bearings and telescopes.

### Software Development Intern — MPLEX VR (Startup)

May 2018 - Current

Developed virtual reality environments for MPLEX (UE4, C++)

### Production Intern — Southbrook

June 2013 - June 2015

Live sound reinforcement and automated lighting design

## Selected Projects

### Security Analysis of DSRC Protocols — 160 hours

Built a simulation to demonstrate security vulnerabilities in proposed vehicle communication protocols (UE4, C++, Python)

### Quantum Key Distribution Simulator — 90 hours

Python scripts to simulate attacks on QKD implementations (Python)

### Media MD5-AES Signing Protocol — 30 hours

Ensures file authenticity by signing with encrypted MD5 hashes (Java)

## Publications

Kanipe, Chase R. (2018). On Secure Specifications for Large-Scale Quantum Key Distribution Systems. Journal of Undergraduate Reports in Physics, 1-5. (Print)

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## Skills

### Programming (Fluent)

C, Java, Python

### Programming (Proficient)

x86 assembly, Q#, HTML/CSS, Bash, .NET

### Reverse Engineering

Radare2, Immunity Debugger, Evans Debugger, GDB

### Penetration Testing

Nmap, Wireshark, Burp Suite, Metasploit, Beef XSS, etc.

### Graphics

UE4, Blender 3D, GIMP

### Other

Github

## Extracurricular

UMD Cybersecurity Club

UMD XR Club

Terrapin Record Label

Society of Physics Students

## Awards

Accepted to speak at AIAA on cybersecurity and aerospace

MRHS "Computer Science" Award