

Vikram Rao

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Education

2015-2019 **University of Maryland, College Park, MD,**
(exp.) *Bachelor of Science in Computer Science, specializing in Data Science,*
Bachelor of Math,
Advanced Cybersecurity Experience for Students Minor,
3.9/4.0 GPA.
Completed the Advanced Cybersecurity Experience for Students (ACES) Honors College

Relevant Coursework

- CMSC421 - Artificial Intelligence
- CMSC426 - Image Processing/Computer Vision
- CMSC430 - Introduction to Compilers
- CMSC320 - Introduction to Data Science

Skills

- Languages (in order of familiarity): Python, C, Java, Bash, OCaml, Fortran
- Operating Systems: Linux (Ubuntu, Debian, Kali), Mac OSX
- Miscellaneous: Wireshark, git, gdb

Work Experience

- 2017 **Cryptographic Project Developer, Dr. Jonathan Katz, University of Maryland, College Park, MD.**
Developed vulnerable oracle servers and sample attacks on them in C for Dr. Katz's Coursera course. Two of the projects were the following:
 - An ElGamal decryption server vulnerable to the shared factors of multiple decryptions
 - An AES encryption server vulnerable to a non-uniform IV attack
- Summer 2016 **Summer Programming Intern, Alexander Ken, National Oceanic and Atmospheric Administration, College Park, MD.**
Prototyped a framework for passing satellite image data from Java to C++ to scientific algorithms in Fortran for processing.
 - Used a custom Java heap-allocated data structure for efficient native data-processing calls
 - Evaluated different data flow paths through the different languages for optimal efficiency
- Summer 2014 **Summer Programming Intern, Dr. Charles Schwieters, National Institutes of Health, Bethesda, MD.**
Added graphical access to functions previously available exclusively through the command line in VMD-XPLOR, a globally used protein modelling program.
 - Gained fluency in Tcl/Tk and python while working with production code
 - Self-directed research into language concepts to complete time-sensitive projects
 - Committed updates with bazaar and gained experience with logging changes

Extracurriculars

- 2015 **Competed in hackathons: Daemon Dash, MHacks, Bitcamp.**
- 2015-present **Competed in CTFs including: picoCTF, National Cyber League, Metropolis, Parsons CTF 2015.**