

# RICARD MARSAL I CASTAN

## STUDENT - ATHLETE

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## EDUCATION

<b>Fairmont State University, WV, USA</b> B.S. Computer Science, Cybersecurity GPA 3.87 2021 B.S. Mathematics GPA 3.6 2021 Honors Program, Men's Swimming	2019 - 2021
<b>Davis and Elkins, WV, USA</b> B.S. Computer Science B.S. Mathematics	2017 - 2019
<b>Hedgesville High School, WV, USA</b> High School Diploma 2017	2016 - 2017
<b>IPSI, Barcelona, Spain</b> High School	2010 - 2016

## SKILLS

**DEVELOPMENT:** Python, Java, C++, JavaScript, Arduino, Scala, Spark  
**SPOKEN LANGUAGES:** English, Spanish, Catalan  
**MACHINE LEARNING:** Random Forests, Genetic Algorithms, ANN

## RESEARCH

<b>Genetic Algorithm and Machine Learning for Intrusion Detection Systems</b> A novel algorithm for intrusion detection of network data based on a Random Forest and a Genetic Algorithm (Scala, Spark)	2019 - Current
<b>Probability of Obtuse triangle choosing 3 random points</b> Using probability techniques I'm constructing a formula to find how many triangles can I find in a finite plane, then apply it to the infinite plane and verified with a Monte Carlo simulation	2019 - Current

## PROJECTS

<b>E-Voting</b> Implement a decentralized voting service using Ethereum blockchain	2020
<b>Mercury Challenge</b> In Mercury Remote Robot Challenge, we were required to design and implement a robot capable of completing a variety of tasks while under the control of an operator located at least 50 miles from the competition site at Oklahoma State University in Stillwater, Oklahoma	Apr. 2018
<b>3D Printed Medicine Drone</b> A 3D printed drone with a little fridge below that allowed to carry medicine to places with difficult access	2015 - 2017

## EMPLOYMENT

<b>D&amp;E Volunteers Operating Production Systems, <i>Specialist DevOps</i></b> Development, operation, and maintenance of the client's production systems to address the client's real needs. Creation of front end, back end and tests of the Tutoring login page. (JavaScript, HTML, CSS, Sails.js, Node.js) The Tutoring Center. <a href="https://www.dewv.net/">https://www.dewv.net/</a> Code: <a href="https://github.com/dewv/nlcAttendance">https://github.com/dewv/nlcAttendance</a> .	2017 - 2019
<b>Fairmont State University, <i>Resident Assistant</i></b> Provide clear expectations to students on appropriate behaviors and community standards. Encourage responsible decision-making and accountability.	Aug. 2019 - Current
<b>Tutoring Center FSU, <i>Tutor</i>, Fairmont State University</b> Tutor of Calculus, Differential Equations, Statistics, C++, and Java.	Oct. 2019 - Current
<b>Davis and Elkins College, <i>Resident Assistant</i></b> Promote the growth and development of students by contributing to a sense of community.	2017 - 2019
<b>Davis and Elkins College, <i>Student Ambassador</i></b> Contribute and interact positively and persuasively with visiting students and their families. Portray the Davis & Elkins College experience while acquainting prospective students with D&E's traditions, regulations, programs, services, activities, and building locations. Manage student database and answer questions from prospective students	2017 - 2019

## VOLUNTEERING

<b>Helper Helper, <i>Administrative</i></b> Help the community of Elkins we offered free swimming classes where our swim team would be the instructors. I managed to arrange the schedule of the volunteers and also participate in it. We logged more than 300 hours of community service per year.	2017 - 2019
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