

Dear Hiring Manager,

My name is Marc Mailloux, and I am currently finishing my last year of the Modeling and Simulation Master's Program (non-thesis option) at the University of Central Florida (UCF). I currently work as a Graduate Teaching Assistant for Perspectives of Modeling and Simulation, where students learn M&S basics and gain an understanding of the use of M&S in each respective industry.

Through my coursework, I have gained a proficiency in Python and R to apply data mining, machine learning, and modeling and simulation techniques. Taking these courses have helped solidify my fundamental knowledge of machine learning and data mining from the bias-variance trade off and regression techniques to K nearest neighbors, neural networks, and clustering, to name a few. My relevant experience includes my involvement in the CFE Data Mining Competition Hosted by UCF. The competition involves taking a dataset with 36 predictors and 110,000+ observations that provide both quantitative and qualitative data, and using it to predict whether a loan provider will approve the loan. By the end of my degree, I will have a developed understand of computer vision, natural language processing, convolutional neural networks, deep neural networks, reinforcement learning, and simulating intelligent systems. Additionally, I will be comfortable using OpenAI: Gym, OpenCV, TensorFlow, Spark, and Google's framework dopamine.

With a previous degree in Mechanical Engineering, I am comfortable with CAD, CAM and FEA/CFD Simulation technologies. I primarily use Fusion 360 for designing, CNC, and 3D printing my own projects. For example, I designed and manufactured a back-wheel bicycle rack with a modular framework. I initially 3D printed it with PLA material to test the geometries, and finally decided on PETG for rigidity and longevity. The modular feature makes the design easily adaptable to changing conditions.

Thank you for taking the time to read my cover letter and resume. I feel that my technical skills and willingness to learn reflect the qualifications provided in the job description. I hope to hear from you soon!

Have a great day,

Marc E Mailloux
Modeling and Simulation Graduate Teaching Assistant
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