Maximiliano Jose Velasco

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EDUCATION

Nuclear Engineering, B.S.   **Graduation: May 2023**
GPA: 3.592
NC State University, Raleigh, NC

Relevant Coursework
Introduction to Plasma Physics and Fusion Energy, Fundamentals of Nuclear Engineering III,
Reactor Engineering, Partial Differential Equations, Linear Algebra

EXPERIENCE

Undergraduate Research Scholar   **Summer 2022 - Present**
Department of Nuclear Engineering, North Carolina State University, Raleigh, NC
- **Using Monte Carlo codes MCNP and Serpent to generate multi-group cross sections**
  - **Input the generated cross sections to LUPINE**
- **Wrote a k-infinity calculator to validate resulting cross sections**
- **Presented results in Summer Research Symposium at NC State**

Painting Supervisor   **June 2017- July 2021**
Gills Painting, Statesville, NC
- **Collaborated with senior management to oversee projects and employees**

SKILLS AND ABILITIES

- **Leadership and Communication**
- **LaTeX**
- **MATLAB**
- **Python**
- **Familiar with CMS**
- **Experienced with Serpent**
- **Experienced with MCNP**
- **Bilingual**
- **MS Office**
- **Mathematically inclined**
- **UNIX/Linux**

PROJECTS

Summer project with Brookhaven National Laboratories   **Summer 2022**
- **Usability exercise for NNDC database**
- **Researched what nuclear data is needed to model a Thorium reactor**
- **Characteristics of spent fuel rods**

Senior Design Project   **Fall 2022 - Present**
- **Lengthening 18 month Duke Energy core cycle to 24 months**
- **Using CMS to model different burnable poisons in assemblies to increase burnup**
- **Forming a cost-benefit analysis of lengthened cycle**