

# Cedric M. Slavin

Weslaco, TX

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## EDUCATION

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<b>University of Texas Rio Grande Valley</b>	May 2026 (Expected)
Bachelor of Science, Computer Engineering	Edinburg, TX

## EXPERIENCE

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<b>Computer Engineering Internship</b>	May 2023 - Aug 2023
United States Department of Energy	Savannah River Site, Aiken, SC
<ul style="list-style-type: none"><li>- Obtained a federal security clearance for largely classified nuclear operations</li><li>- Debugged and deployed changes to Power Systems app using C++, professional use of Git</li><li>- Monitored power systems, made calculations, and compiled logistical changes for HVAC installation</li></ul>	
<b>Undergraduate Research Assistant</b>	Sep 2024 - Present
UTRGV Machine Intelligence Laboratory	Edinburg, TX
<ul style="list-style-type: none"><li>- Learning Transformer DL architecture in Computer Vision; data gathering/preprocessing</li><li>- Assisting in developing and fine-tuning models for image classification and object detection tasks</li><li>- Present weekly reports on Multi Agent Reinforcement Learning and Search Algorithms</li></ul>	
<b>IT Engineer</b>	May 2024 - Present
SESA Fleet Services	Weslaco, TX
<ul style="list-style-type: none"><li>- Assisted in the development of employee logging app using Typescript</li><li>- Troubleshoot internet problems, set up local network server infrastructure (ongoing)</li><li>- Designed and implemented new website frontend, drove online employee applications up 50%</li></ul>	

## PROJECTS

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<b>Electric Guitar Image Classifier - Python, Tensorflow, Render, Keras, Pillow, Flask, JS</b>
<ul style="list-style-type: none"><li>- Fine-tuned pretrained model from 30% train/valid accuracy to 85% train/valid accuracy</li><li>- Created CNN and trained with preprocessed data, tailored with search queries from Google</li><li>- Developed with DevOps convention: Deployed to web service, version controlled using Git</li></ul>
<b>Analog Delay Guitar Pedal - (In Progress) - LTspice, Soldering, KiCad</b>
<ul style="list-style-type: none"><li>- Designed and built a delay pedal for personal recording use (<a href="#">Popular example of delay being used</a>)</li><li>- Designed circuit schematic in LTspice, PCB designed using KiCad, soldered components from Amazon</li><li>- Tested and optimized the pedal's audio performance to ensure high-quality delay effects</li></ul>
<b>Autonomous Vehicle Reinforcement Training (Hackathon Project) - Pytorch, Python, LateX</b>
<ul style="list-style-type: none"><li>- Used reward-based function, rapid decision-making and stable performance in multi-agent simulations.</li><li>- Trained autonomous vehicle on a circular track, over 95% collision-free accuracy, across 10+ test runs.</li><li>- Solved Reinforcement Learning hackathon problem in 24 hours, only one to do so</li></ul>
<b>Preventing Opioid Abuse - Arduino/C++, AutoDesk Inventor</b>
<ul style="list-style-type: none"><li>- Modeled, 3D printed, and assembled a programmable pill bottle to prevent pill abuse</li><li>- Programmed the bottle's physical systems such as solenoids, timers, locks, etc.</li><li>- Placed 7th/78 in school-wide engineering competition, presented in front of 5 professional engineers</li></ul>
<b>Chip8 Emulator - JS, HTML, CSS</b>
<ul style="list-style-type: none"><li>- Low-level emulation of classic CHIP8 programs like Pong and Space Intercept</li><li>- Applied advanced skills in assembly programming: registers, working with the stack, opcode translation</li><li>- Developed problem-solving and debugging skills, ChatGPT estimated top 10% runtime performance</li></ul>

## SKILLS

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- **Programming Languages (Fluent in):** Python, C++, JavaScript, Typescript
- **Libraries/Frameworks:** TensorFlow, Keras, Flask, Git
- **Tools:** Docker, ETAP, Render, AWS, Azure, Arduino, GitLab CI/CD

## PERSONAL

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- **Interests:** Music, Boxing, American/English Literature, American History