

Cedric M. Slavin

Weslaco, TX
cedricslavin@gmail.com | (956) 358-2378

EDUCATION

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

EXPERIENCE

Computer Engineering Internship	May 2023 - Aug 2023
United States Department of Energy	Savannah River Site, Aiken, SC

- Obtained a federal security clearance for largely classified nuclear operations
- Debugged and deployed changes to Power Systems app using C++, professional use of Git
- Monitored power systems, made calculations, and compiled logistical changes for HVAC installation

Undergraduate Research Assistant	Sep 2024 - Present
UTRGV Machine Intelligence Laboratory	Edinburg, TX

- Learning Transformer DL architecture in Computer Vision; data gathering/preprocessing
- Assisting in developing and fine-tuning models for image classification and object detection tasks
- Present weekly reports on Multi Agent Reinforcement Learning and Search Algorithms

IT Engineer	May 2024 - Present
SESA Fleet Services	Weslaco, TX

- Assisted in the development of employee logging app using Typescript
- Troubleshoot internet problems, set up local network server infrastructure (ongoing)
- Designed and implemented new website frontend, drove online employee applications up 50%

PROJECTS

Electric Guitar Image Classifier - Python, Tensorflow, Render, Keras, Pillow, Flask, JS

- Fine-tuned pretrained model from 30% train/valid accuracy to 85% train/valid accuracy
- Created CNN and trained with preprocessed data, tailored with search queries from Google
- Developed with DevOps convention: Deployed to web service, version controlled using Git

Analog Delay Guitar Pedal - (*In Progress*) - LTspice, Soldering, KiCad

- Designed and built a delay pedal for personal recording use ([Popular example of delay being used](#))
- Designed circuit schematic in LTspice, PCB designed using KiCad, soldered components from Amazon
- Tested and optimized the pedal's audio performance to ensure high-quality delay effects

Autonomous Vehicle Reinforcement Training (*Hackathon Project*) - Pytorch, Python, LaTeX

- Used reward-based function, rapid decision-making and stable performance in multi-agent simulations.
- Trained autonomous vehicle on a circular track, over 95% collision-free accuracy, across 10+ test runs.
- Solved Reinforcement Learning hackathon problem in 24 hours, only one to do so

Preventing Opioid Abuse - Arduino/C++, AutoDesk Inventor

- Modeled, 3D printed, and assembled a programmable pill bottle to prevent pill abuse
- Programmed the bottle's physical systems such as solenoids, timers, locks, etc.
- Placed 7th/78 in school-wide engineering competition, presented in front of 5 professional engineers

Chip8 Emulator - JS, HTML, CSS

- Low-level emulation of classic CHIP8 programs like Pong and Space Intercept
- Applied advanced skills in assembly programming: registers, working with the stack, opcode translation
- Developed problem-solving and debugging skills, ChatGPT estimated top 10% runtime performance

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