

Arturo Duran Castillo

+52 417-110-9561 | ducasarturo@gmail.com | linkedin.com/in/arturoducas | github.com/ArturoDuCas | arturoducas.com

EDUCATION

Tecnológico de Monterrey, ITESM

B.S in Computer Science and Technology

Monterrey, Nuevo León

Expected Graduation: June 2025

- GPA: 3.9/4.0 (equiv. 97.6/100)
- Scholarships: Academic Talent Scholarship

EXPERIENCE

Software Developer Intern

Softtek

June 2024 - Present

Monterrey, Nuevo León

- I designed and developed an NPX tool that integrates various codemods using jscodeshift to automate the migration of projects with deprecated dependencies.
- I integrated the tool with GitHub through a GitHub App to enable automated actions like creating pull requests and issues within the repository.
- The tool was successfully utilized in a project, analyzing 340 files and modifying over 5000 lines of code, reducing the migration time from more than 14 hours to less than 2 minutes.

Web Developer Intern

Swirle

June 2023 – Aug. 2023

Monterrey, Nuevo León

- I developed employee performance indicators for around 35 affiliated companies using React and Firebase, enabling companies to identify performance information for each of their employees.
- I initiated the development of a new feature called "Automations," aimed at providing companies with a tool to configure automatic actions triggered by specific events, such as a new purchase.

PROJECTS

Research on LLMs for Aphasia Diagnosis | *Hugging Face*

Feb 2024 – June 2024

- I conducted research in collaboration with a neuropsychiatrist on Large Language Models (LLMs) for their application in the diagnosis of aphasia.
- I compared over 10 text generation and speech-to-text models using the Hugging Face ecosystem, running them locally to evaluate their capabilities and performance specifically for this task, a report was generated with the comparative analysis.

Multi-Agent System for Harvesting Process Optimization | *Unity, Node.js, WebSocket* Aug 2023 – Sep 2023

- Collaborated with John Deere to develop a 3D Unity simulation to optimize the harvesting process.
- Developed a React-based web interface for simulation parameter input and real-time monitoring of vehicle metrics using WebSocket communication.
- Implemented advanced algorithms, including a modified Traveling Salesman Problem for harvesters' routes and Q-learning for tractors' crop collection paths, optimizing harvesting efficiency.

LEADERSHIP / EXTRACURRICULAR

Intercultural, Sustainability and Global Citizenship Program

Thompson Rivers University

Dec 2023

Kamloops, British Columbia

- Obtained a scholarship from the state of Guanajuato, Mexico to attend this program.
- Active participation in intercultural environments, where I honed intercultural communication and teamwork skills.
- Promoted global awareness and sustainability, vital for future project development. Gained insights on global citizenship, integrating diverse perspectives to tackle international issues.

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Python, C++, C#, HTML/CSS.

Additional Technologies: Docker, Angular, Next.js, Node.js, MySQL, PostgreSQL, MongoDB, Unity.

Developer Tools: Git, GitHub, Google Cloud Platform, Firebase, Supabase.