

THOMAS EMANUEL BERMÚDEZ MORA

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Profile

Full-stack software engineer specializing in web applications with strong UI/UX focus and machine learning expertise in computer vision. Contributed to award-winning projects at Cannes Lions Festival and Grupo AUGE-UCR. Committed to craftsmanship, education and continuous improvement.

Experience

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| Link Agency | San José, Costa Rica / Remote |
| Software Developer | Jun 2023 – Present |
| • Maintained and implemented WordPress sites, prioritizing responsive UI/UX across multiple client projects. | |
| • Integrated custom PHP functionalities to reduce plugin dependencies and improve code maintainability. | |
| • Optimized MySQL database structures for seamless integration with in-house server environments. | |
| • Developed website for a campaign that earned a Silver Lion at the 72nd Cannes Lions Festival (Public Relations – Market Disruption) among 1,531 global competitors. | |
| • Served as primary developer for a custom web application that replaced Excel workflows, eliminated 100% of manual data entry, automated work order processing, and enabled real-time tracking with visual reporting. | |
| ISAAC Project (Freelance for UCR undergraduates) | San José, Costa Rica / Remote |
| Machine Learning & Backend Developer | Mar 2023 – Nov 2023 |
| • Developed backend/ML infrastructure for the ISAAC Project, awarded by the 2022 Program of Technological Innovation (AUGE-UCR Group), enabling UCR students to graduate with honors based on project results. | |
| • Generated and validated wildlife image datasets from camera trap data to train species classification models. | |
| • Trained computer vision models in Python (Google Colab, TensorFlow/PyTorch), achieving 98.22% test accuracy with only 11 errors out of 618 samples. | |
| • Maintained precision scores exceeding 93% for frequent classes with strong recall on challenging categories and robust handling of unseen species. | |
| • Designed MySQL database schemas for project, user, and species data management. | |
| • Implemented Flask REST APIs for authentication, projects management, and species reclassification workflows. | |
| • Deployed system to AWS with cost-optimized architecture, balancing performance and operational expenses. | |
| MobyDyg | Heredia, Costa Rica / Remote |
| Full Stack Software Engineer | Mar 2022 – Nov 2022 |
| • Designed and implemented a user management system for e-commerce staff portals using Angular, TypeScript, SCSS, and AWS Cognito, integrating responsive front-end modules with AWS Amplify and SDK for secure authentication and role-based access control. | |
| • Rebuilt, normalized and migrated the company's MySQL database, ensuring compliance with relational best practices and improving query efficiency, data integrity, and security. | |
| • Collaborated in team-based and pair programming environments to accelerate feature delivery and improve code quality. | |
| Cenfotec University | San José, Costa Rica / Remote |
| Machine Learning & Computer Vision Intern | Jan 2022 – Dec 2025 |
| • Developed an ALPR system using YOLOv5, Flask API, and Google Colab, achieving 96% accuracy in license plate detection and 77% in vehicle detection. | |
| • Web scrapped an experimental dataset of 942 Costa Rican license plates to improve local model performance. | |
| • Implemented a multi-stage detection pipeline with OCR preprocessing to enhance text recognition accuracy. | |
| • Built and deployed a cloud-based API service for image uploads, detection processing, and plate text extraction. | |
| • Authored an academic research paper detailing methodology, experimental results, and recommendations for system optimization. | |

- 3Pillar Global** San José, Costa Rica / Remote
Software Engineering Intern Oct 2021 – Jan 2022
- Prototyped responsive web application interfaces in Figma and implemented them with React.js, ensuring consistency with the client's design system.
 - Designed SQL Server database and implemented backend features using C# and ASP.NET MVC for maintainability and scalability.
 - Collaborated through pair programming and code reviews to validate functionality and improve code quality.

Education

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| Cenfotec University Bachelor of Software Engineering. GPA 4.0 Honors: Holder of a 100% scholarship for academic excellence. | San José, Costa Rica Jan 2022 - Dec 2025 |
| Cenfotec University Machine Learning with Python | San José, Costa Rica Nov 2022 - Dec 2022 |

Skills

Technical: Python, JavaScript, TypeScript, PHP, C#, HTML, CSS/SCSS • React.js, Angular, Flask • MySQL, SQL Server • WordPress • AWS • TensorFlow, YOLO, Google Colab • Git, GitHub • Figma
Soft: Empathy, Resilience, Self-Control, Adaptability
Languages: Spanish (Native), English (C1 - TOEFL iBT)

Extracurricular Activities

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| Robotics & Programming Instructor Volunteer educator teaching robotics fundamentals and programming concepts to children, fostering early interest in STEM and computational thinking. | The ClubHouse, CEDES Don Bosco Sep 2025 – Present |
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