

Eric Margay

Hardware & Software Developer Engineer

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Professional Experience

FORD MOTOR COMPANY / GLOBAL TECHNOLOGY & BUSINESS CENTER

FEBRUARY 2023 - CURRENT TIME 2024

*Software Engineer
IPTSE CAE
México City*

MAIN EXPERIENCE

- Develop new code based on the deadlines scheduled by the team leader/PM/supervisor to deliver projects on time.
- Design and develop technology integration between systems.
- Unified hardware product systems with engineering teams.
- Built tools based on apps experiences and customer's needs.
- Work with agile methodology for issue tracking and monitoring.
- Remained up-to-date on latest coding practices and learn new skills.
- Wrote clean, reusable, well-commented code.
- Collaborated with other developers engineers and designers, often handling other's work.
- Participate actively in all phases of software development life cycle (SDLC).
- Create technical documentation as needed or requested.
- Document project requirements and specifications.
- Propose different ways to solve code problems or suggest new improvements for the code (refactoring).
- Test applications before they are released into production environment.
- Troubleshoot application issues reported from users.
- Propose different ways to solve code problems or suggest new improvements for the code [REFACTORING].
- Report weekly activities to the team leader, including challenges and discoveries.
- Perform peer to peer meetings reviews.

SPECIFIC EXPERIENCE

- Collab developing software and hardware for intern innovation.
- Microsoft PowerApp automation code development with Planner and Sharepoint Connectors.
- Work with github roadmaps as a agile methodology for issue tracking and monitoring.
- Wrote clean, reusable, well-commented code using PEP-8 Python Standards.
- Created custom solutions with Python and Javascript for customer's specific needs.
- Maintain Python code for the automation of reports already developed for the virtual CAE PowerTrain testing teams.
- Apply clean code and solid principles for code development.
- Used Git version control system to manage source codes.
- Python and JS Code Documentation and presentation in Jupyter Notebooks.
- UI / UX Design infrastructure implementation Figma Sketches.
- Creating code sub-module to control smart signaling lighting applied to the automotive issues.

Main Skills

Software

Python, HTML, CSS, JavaScript, C++, Django, Visual Studio Code, CLI, Shell and Arduino IDE.

Hardware

Raspberry PI, Atmel Microcontrollers, ESP32, Espressif module boards.

Design

Adobe Illustrator, Adobe Photoshop, Figma, Spline.

Secondary Skills

Software

Conda Enviroment, NodeJS, Express, jQuery, ThreeJS, Flexbox, NPM, Github, NPM Webpack, SQL, Jira.

Hardware

EasyEda, Eagle, KiCad.

Design

Unity, Blender.

Aknowledgments

IoT Python with Azure -

OpenDevCamp

HOTEL GALERÍA PLAZA REFORMA, 2020

OpenDevCamp - Microsoft Azure

Community Engineer Hero -

Streamr

TALENT LAND JALISCO, ABRIL 2019

Twitter - Streamr Community

MAIN EXPERIENCE

- Modified and implemented company API with company's product suite.
- Design, develop and custom technology integration between systems.
- Unified hardware product systems with developed apps.
- Built web based apps experiences based on customer's needs.
- Technical support of the developed works to customers.
- Remained up-to-date on latest web practices and learn new skills.
- Wrote clean, reusable, well-commented code.
- Created custom solutions with Python and Javascript for customer's specific needs.
- Upgrade cloning systems to production.
- Created and Modified software and hardware tools to enhance built functionalities.
- Trained new hires on various aspects of company's development process.
- Developed and modified back-end and front-end functionalities.
- Collaborated with other developers engineers and designers, often handling other's work.

SPECIFIC EXPERIENCE

- Creating code sub-module to control smart signaling lighting with serial port communication between Python Oriented Object Programming and hardware frameworks.
- Functionalities with websockets communicating between Javascript and Python scripts.
- MVC Implementations in Django of new capabilities.
- Connect with SSH remote servers to get control of some behaviours in Apache for testing data correlations with WALMART customer client.
- Python and JS Code Documentation and presentation in Jupyter Notebooks.
- UI / UX Design infrastructure implementation Figma Sketches.

MAIN EXPERIENCE

- Hardware and Software Development focused in Real Time Tracking Services.
- Indoor Positioning with Ultra Wideband Radiofrequency Technology.
- Electronic Design systems.

SPECIFIC EXPERIENCE




- Implementing hardware code to manage UWB trilateration signals with Micro Python and C++.
- Communication with websockets in the model app for public transportation.
- MVC Implementations in Django of new capabilities.

Mentoring - MXHACKS V
MAJOR LEAGUE
HACKING HACKATON,
2018
MLH

Bots Crash course - Wizeline
Academy
CENTRO BUILDING, 2017
WIZELINE

Facebook Hackaton - Aldea
Digital 4G
MEXICO CITY, 2017
<https://hubtelmex.com>

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MAIN EXPERIENCE

- Consulting technology solutions to cross Software to Hardware.
- Developed python solutions from Raspberry PI to cloud.
- Worked with various departments to create best solution for customer in health area.
- Documented common issues and corresponding solutions.

SPECIFIC EXPERIENCE

- Coding Python HTTP request of measurements to cloud.
- Develop Python Algorithms for ECG sensors data.
- Hacking actual systems to enhance in house implementation of Medical Hardware.

STREAMR INC. *Engineer freelance / Evangelist Tech – Switzerland*

MARCH 2019 - CURRENT TIME 2024

MAIN EXPERIENCE

- Resolved issues between the API and Internet of things connected with the blockchain platform market.
- Created a crash course to explore many possibilities with hardware.
- Assisted students on technology events.
- Automated processes with GIT.
- Learned new programming languages and skills to boost efficiency.

SPECIFIC EXPERIENCE

- Working with python programming structured data to stream to the streamr cloud.
- Created Python course under Raspberry Platform and ESP32 Dev Boards.
- Assisted academic students in the python modules.

Technology Educational Experience

IRON HACK MÉXICO *Code Mentoring Workshop UX / UI*

FEBRUARY 2023

- Instructor a UX / UI bootcamp group into Code Web Programming.
- Design and Prototype Figma Frame with Responsive behavior.
- Working with Visual Studio Code and Github. [INFO LINK](#)

EPIC QUEEN / FUNDACION TELEvisa / MICROSOFT

Code Mentoring Workshop Web Programming

OCTOBER 2022 - NOVEMBER 2022

- Mentoring a "Tecnologicas" woman group into Web Programming.
- Coding HTML + CSS + Javascript.
- Working with Visual Studio Code and Github. [INFO LINK](#)

EUM WALMART

Internal Crash Course Coding Workshop with Javascript and Python

SEPTEMBER 2022 - JANUARY 2023

- Training the engineering team to get the necessary coding skills.
 - Coding Oriented Object Programming project in Python.
 - Coding nested objects with classes.
 - Working with server and client websockets in Javascript and Node JS.
 - Working with server and client websockets with Python server.
 - Working with server and client websockets in ARM microcontrollers from ESPRESSIF model ESP32"
 - Automated processes with databases and Django.
-

TALENT LAND - TALENT REPUBLIC / STREAMR *Online Coding Ed Tech Workshop*

NOVEMBER 2020

- Training workshop using RUUVI beacons, an open source BLE sensors to send enviromental information to the Streamr blockchain marketplace crypto cloud. Doing this with coding Python on Raspberry Pi to capture the bluetooth messages and manage the data interpretation.
 - Visualization data with the online React app Plotly. [YOUTUBE LINK](#)
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MICROSOFT / OPENDEVCAMP *Ed Tech Workshop With Azure*

MARCH 2020 - HOTEL GALERIA PLAZA REFORMA CDMX

- A workshop using Open Source Technologies in the INTERNET OF THINGS area organized with Microsoft and AMESOL.
 - App implementation using the Azure Cloud connected with Hardware.
 - Coding with Python to manage every functionality with Raspberry Pi as a "Gateway". [INFO LINK](#)
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NEHENEMI LABS *Raspberry Pi Day Workshop*

MARCH 2019 - CENTRO CULTURAL GOMEZ MORIN

- A workshop teaching about Open Source Tech and celebrating the Raspi Day. [INFO LINK](#) [INFO LINK](#)
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ENCUENTRO EDUCACION MAKER MEXICO / EDUKREATIVOS / *Wearables Workshop*

AUGUST 2018 - COLEGIO HEBREO MAGUEN DAVID

- A workshop using ATTINY Atmel microcontrollers to control lights in a brazalet. [INFO LINK](#)
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TALENT LAND *Internet of Things Workshop*

AUGUST 2019 - CENTRO DE CONVENCIONES GUADALAJARA.

- A workshop using ATTINY Atmel microcontrollers to control lights in a brazalet. [INFO LINK](#)
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Artistic Experience

A1 LABORATORIO FX *Product Design Engineer – México City*

JULY 2022 - SEPTEMBER 2022

- Lighting product design wearable to fit on the skull brain of a character prop. The hardware implementation used an ESP32 as a core of the lighting control with a rechargeable energy regulator. The code used lets choose some light patterns to care of the director art decisions in the cinematographic set call. [NO LINK FOR COPYRIGHTS]
- Interactive code invitation design fo the anniversary of the lab, interactivity programmed in Javascript. [CODEPEN]

BIOSCÉNICA - HIEROPHANIA LAB - HEMISPHERIC INSTITUTE

JUNE 2019

*Creative Light
& Sound Coding –
México City*

- Collaborated with the Empaty 5.1 Concept, a Technochamanic Ritual for specific site performance. Coding the light behavior of the "Suavicrema" Light Building of the "Centro de Cultura Dlgital". The art installation consist of the websocket communicating with UDP and OSC protocols with a ESP32 portable Heartbeat system and the server light machine with VVVV software to manage the light and performance activaated with sensing the heart of the public during the event. Also, the light performance was activated with the conversión of data into light. [WEBPAGE LINK]
 - Digital Sculpture using Cosmic Rays as a data code programmed showing the conversion into light on VR Visor [WEBPAGE LINK]
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Academic Education

Physics Applied Center and Advanced Technology - UNAM

Querétaro - México City

GRADUATED MAY 2016

- Bachelor of Technology.
- Framework of Science and Engineering.
- Specialities in physics of energy, electronics, programming and robotics.

Codecademy - Bootcamp

Online Web Career Paths - México City

2021 - 2022

- Python 3
 - Python with Django
 - Javascript
 - React Crash Course
 - UI / UX
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EDX - Massachusetts Institute of Technology

MITx - México City

2024

- 6.00.1x: Introduction to Computer Science and Programming Using Python