

## EXPERIENCE

---

### • Brown Brothers Harriman

*Senior Software Engineer*

Boston, MA

*Apr 2023 - Present*

- **Data Platform:** As part of the **InfoDataFabric** team, I'm the technical lead for the 3 main services powering client facing applications, driving both product goals like the prioritization and implementation of new features, release planning and on-call support as well as providing guidance in aspects like code quality, documentation, testing and automation. Some examples include:
  - \* Designed and implemented error handling strategy used team wide, from format definition to implementation and refactor.
  - \* Reduced the latency when communicating with the datalake service by 30% by optimizing queries, caching responses and decoupling the datalake from the rest of the services using a message queue.
  - \* **Tech stack:** Java, Spring, SQL, Angular, Python

### • Twitter

*Senior Software Engineer*  
*Software Engineer*

Boston, MA

*Sept 2022 - Jan 2023*  
*Dec 2019 - Aug 2022*

- **Ads Serving Platform:** As part of the **Ads Serving Platform** team, I've worked in the re-architecture of the AdServer platform, completing the transition to a microservices based architecture and continue its improvement in areas like configuration, experimentation and scalability. Provided regular oncall support for some of the main services used in the ad serving pipeline. Collaborated with partner teams in the introduction of new ad products.
  - \* **AdServer:** Led the design and implementation of a rule-based configuration system to enable a dynamic ad search and selection pipeline.
  - \* **ShardLib:** Contributed to the implementation of a **Sharding Library**, used to simplify the management of sharded microservices in the serving pipeline.
  - \* **Tech stack:** Java, Scala, Python, Finatra/Finagle, Thrift

### • GE Aviation

*Senior Software Engineer*

Queretaro, Mexico

*Apr 2019 - Nov 2019*

- **Digital Cloud Solutions:**
  - \* **Connected Aircraft / NEXTNet-avSync:** Developed microservices to extract flight data, process it and send it to the cloud (part Avionics's **NEXTNet-avSync**).
  - \* **Tech stack:** Java, Python, Spring, Azure

*Embedded Software Engineer*

*May 2014 - Apr 2019*

- **Avionics & Digital Systems:** Technical leader for Mexico's team of an IR&D project that focuses on next-generation flight decks, improving the graphical capabilities of display apps and exploring new ways of human-machine interaction. Led global training sessions for users of our Avionics stack, participated in the organization of two successful hackathons directed towards both students and professionals.
  - \* **Virtual OpenGL:** Contributed to the design and implementation of a custom graphics API based on OpenGL ES. Developed tools to integrate high-level design software with our graphics stack as well as the cross-platform build system for the graphics API. Led the development of a digital moving map, designed and build an API for remote drawing, interaction and control, part of the **Open Flight Deck** project.
  - \* **RPC System:** Designed and implemented a simple RPC system for sending avionics information on top of **ZMQ**, written in C and with client and server APIs for C, Python, C#, as well as a code generator for transforming JSON formatted data model definition files to ZMQ C API.
  - \* **Tech stack:** C, Python, OpenGL, Yocto

## EDUCATION

---

### • Benemerita Universidad Autonoma de Puebla



*Master of Science in Electronics*  
*Bachelor of Engineering in Mechatronics*

Puebla, Mexico

*Aug. 2011 – Jun. 2013*  
*Aug. 2005 – May. 2010*

## OTHER PROJECTS

---

- **Autonomous Mobile Robot:**  [mobile\\_robot](#) — Mobile robot platform for academic research (Patent [MX/I/2018/100659](#)).
- **dsPIC Peripheral Libraries:**  [dspic33f\\_pic24h\\_corelibs](#) — Peripheral libraries with support for UART, SPI, I2C, I/O, QEI, Timers, ADC for the PIC24/dsPIC33F family of microcontrollers.