

Daniel Alberto Herrera Rendón

hhefesto@rdataa.com
Querétaro Qro, México
<https://github.com/hhefesto>

Education:

Instituto Tecnológico Autónomo de México (degree pending) with two majors and a minor: Mayor Computer Engineering, mayor Applied Math, minor economics (4 semesters). Follow [this link](#) for more details.

Technical skills:

- Languages: Haskell, Nix, C, C++, Java, PHP, Lisp (Emacs), Clojure, Visual Basic, SQL
- My current choice of web stack + other techs: NixOS, nginx, Postgres, Haskell, deploy-rs, Hetzner, Yesod/Servant/reflex-frp
 - <https://xpsoasis.org> uses this stack
- Techs worth mentioning on my personal computer: NixOS, nix with flakes, GIT, Emacs, XMonad
- Have deployed to Hetzner, Google Compute Engine and Amazon Web Services
- Databases I've used: Postgres, MySQL, Microsoft SQL server, Glassfish, Apache Tomcat

Work experience:

- Language developer of Telomare (stand-in-language.github.io/)
 - June 2023 - Present
 - Improve Telomare's REPL
 - Annotated grammar evaluation with Cofree
 - [Full and partial evaluator with frontend for telomare](#)
 - Module system implementation
- CTO of RDATA S de RL MI (xpsoasis.org and xesoasis.org) - side project
 - 2016 - Present
 - Collaboration with Los Alamos National Laboratory to merge AAnalyzer with their AI implementation, and to populate the xpsoasis.org database with the new and AI powered AAnalyzer (name pending)
 - Maintain AAnalyzer (a C++ experimental physics desktop application for fitting some non-linear functions to XPS experimental data)
 - Building of a new XPS fitting parameters database
 - Porting from Php to Haskell for web platform (xpsoasis.org)
 - NixOS, nginx, Postgres, Haskell, nixops, nix flakes, GCE, yesod, esqueleto, lucid
 - Taught Haskell to newcomers (5 total) to the point of being able to collaborate in our Yesod project
 - Porting AAnalyzer to Haskell
- Senior developer at FPComplete
 - July 2022 - May 2023
 - SRE responsibilities with client Simspace
 - Nix improvements and maintenance like adding nix flakes, updating haskell.nix and configuring nix cache with Cachix
- Language developer of Telomare (stand-in-language.github.io/)
 - January 2020 - July 2022
 - Porting parser from Parsec to Megaparsec
 - Implementing recursion schemes (paramorphism) evaluation of grammar

- Usage of lenses and prisms in quickcheck tests and parser
 - Setting up CI with github actions and cache with Cachix
- Intern at Microsoft, Redmond
 - Summer of 2016 (3 months)
 - Worked on an Excel add-in to implement a Scratch-like macro recorder
- Co-Founder and Developer of a startup: Slice
 - 2015 - 2016
 - Developing a REST API (Clojure) and configuring linux servers (Postgres, Tomcat, Nginx)
- Software Developer at Blue Messaging SA de CV (Mexico City)
 - July 2015 - November 2015
 - Development of natural language processing algorithms in Java: a natural language to arabic numbers processor, and a natural language date to UTC formatting using a parser. Use of Scrum (Agil)
 - <http://bluemessaging.com/>
- CTO and Innovation Coordinator at the startup Red Wolf SA de CV (Mexico City)
 - August 2014 - January 2015
 - Developed the backend (API, database, and AWS EC2 hosting), and designed & executed the technical interview to hire developers

Some personal projects:

- Personal Blog <https://blog.hhefesto.com>
- Upload tutorials to Youtube (<https://www.youtube.com/channel/UCI-zVnrWIFHLQTSOKzx7ikQ>)

Participations, awards and leadership:

- PLDI 2022 attendee
- ICFP 2020 and 2022 attendee
- Imparted a Proof of Work seminary to Universidad Autónoma de Querétaro's math department (1.5 hours talk)
- Secretary General of AEF (foreigner student body of ITAM) from spring 2012 to fall 2013
- Third place in Concurso Interuniversitario Iberoamericano de Matemáticas 2013 (Iberoamerican Math Universities Competition: the test and other things are at <http://xiciim2019.eventos.cimat.mx/>)
- Participation in Robocup 2012 (international robotics competition)
- Three participations in the ACM-ICPC regionals (algorithmic coding competition)
- Honorary mention on the mexican national math olympics (OMM)
- First place in high school state math olympics (Querétaro)

About me:

- I love math: currently trying to dabble in Category Theory
- I fell in love with functional programming
- I am hardworking and like being part of a team
- Eager to learn and love teaching (teaching usually helps me learn deeper plus other good side effects)