# Daniel Alberto Herrera Rendón

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Education:
Instituto Tecnológico Autónomo de México (degree pending) with two mayors 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, Elisp (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
- CTO of RDATA S de RL MI (http://xpsoasis.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/UCl-zVnrWlFHLQTSOKzx7ikQ)

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)