# Daniel Alberto Herrera Rendón

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

#### Education:

Instituto Tecnológico Autónomo de México (unfinished)

- 1. Computer Engineering (7 semesters: 87% of the credits needed to graduate)
- 2. Applied Math (5 semesters)
- 3. Economics (4 semesters)

#### Technical skills:

- Languages: Haskell, C, C++, Java, Nix, PHP, Elisp (Emacs), Clojure, Visual Basic, SQL
- My current choice of web stack + other techs: NixOS, nginx, Postgres, Haskell, Yesod, haskell.nix, nixops, GCE
  - o <a href="https://rdataa.com/">https://rdataa.com/</a> uses this stack
- Techs worth mentioning on my personal computer: NixOS, nix flakes, GIT, Emacs, XMonad
- Have deployed to Amazon Web Services and Google Compute Engine
- Databases I've used: Postgres, MySQL, Microsoft SQL server, Glassfish, Apache Tomcat

# Work experience:

- Senior developer at FPComplete
  - o July 2022 present
  - 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/)
  - o January 2020 July 2022
  - o 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
- CTO of RDATA S de RL MI (http://rdataa.com/) side project
  - o 2016 Present
  - 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 (http://rdataa.com/)
    - NixOS, nginx, Postgres, Haskell, nixops, nix flakes, GCE, yesod, esqueleto, lucid
  - Taught Haskell to newcomers (4 total) to the point of being able to collaborate in our Yesod project
- 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
  - o November 2015 January 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)
- o http://bluemessaging.com/
- CTO and Innovation Coordinator at the startup Red Wolf SA de CV (Mexico City)
  - o August 2014 January 2015
  - Developed the backend (API, database, and AWS EC2 hosting), and designed & executed the technical interview to hire developers
  - o <a href="http://red-wolf.io/">http://red-wolf.io/</a>

### Some personal projects:

- Personal Blog <a href="https://blog.hhefesto.com">https://blog.hhefesto.com</a>
- Upload tutorials to Youtube (<a href="https://www.youtube.com/channel/UCl-zVnrWlFHLQTSOKzx7ikQ">https://www.youtube.com/channel/UCl-zVnrWlFHLQTSOKzx7ikQ</a>)

## Participations, awards and leadership:

- 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 <a href="http://xiciim2019.eventos.cimat.mx/">http://xiciim2019.eventos.cimat.mx/</a>)
- 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)