Dirk Hornung, PhD
Software Engineer

Languages

German ● ● ● ● ●
English ● ● ● ● ●
French   ● ● ● ●
Spanish ● ● ● ●

Skills

Data Science
Frontend
Backend
Blockchain
Prototyping

Data Science
Python, Tensorflow, Keras, Hadoop, Pandas, Numpy, Matplotlib, Deep Learning
Frontend
JavaScript, TypeScript, React, Angular, React Native, Redux, Flutter, Jasmine, Mocha, CSS, HTML
Backend
AWS, NodeJS, Express, MySQL, PostgreSQL, MongoDB, DynamoDB, Serverless, Flask, Docker, Kubernetes
Blockchain
Ethereum, Solidity, Smart Contracts, Hyperledger Fabric, Token Economy, ICO
Prototyping
Arduino, C++, Fusion 360, 3D-Printing, CNC, Electronics

About me

I am a curious Software Engineer. I adore learning new technologies. I welcome challenges. I constantly push my comfort zone. I like to work under pressure. I take practical decisions. I am a strong motivator for my team. My ambition is to become a TeachLead.

Professional Experience

present
Software Engineer (TVC), Google
- Implemented the Video verification frontend based on Wiz hosted on a Boq Web UI node
- Throughout tested the application using JsUnit, JsWire unit tests and WebDriver integration tests.
- Responsible for the UX/ UI alignment and implementation.

January 2020
Big Data Solution Architect, Fresenius Medical Care
- Oversaw the creation of a data lake.
- Architectured a scalable storage, query and application layer of the Data Lake (Kubernetes, MinIO, Apache Parquet, Presto, Ranger).
- Closely worked with the technical team responsible for the Data Lake implementation.

March 2020
- Designed the Data Goverment roles and processes.
- Performed global stakeholder alignment to harmonize the different data systems of EMEA, USA and Asia.

Mai 2018
CTO, CYSAE (Legaltech)
- Led the developer team (2 people).
- Created an Utility Token, within the Ethereum Blockchain, that allows to buy legal services by paying with a Cryptocurrency.
- Created a web application that anchors documents in the Ethereum Blockchain, to establish secure contracts.

February 2019
- Developped a DAO to remotly hold decentralised board meetings.

October 2017
CTO & Co-Founder, Alda (Fintech)
- Created a Fintech Chatbot that serves as a personal financial advisor.
- Created a reusable chat component.

April 2018
- Integrated the app in varius Wordpress and Liferay installations.

Education

10/15 - 07/19   **Ph.D., Theoretical Physics**, UAB (Spain) / AMU (France)
                             Thesis: The QCD Strong Coupling from Hadronic Tau Decays

10/14 - 09/15   **M.Sc., Particle Physics**, UAB (Spain)
                             Thesis: 1-Loop Anomalous Dimensions of 4-Quark Operators

10/11 - 09/14   **B.Sc., Condensed Matter Physics**, GU (Germany)
                             Thesis: Band Structure Studies of Graphene

Awards

- **Imagine Silicon Valley Finalist**.
  One of ten finalists (>500 applicants) for a trip to Silicon Valley trip.

- **Winner: Imagine Developer Dreamer**.
  Got selected to participate in the "Imagine-Express-Train".

- **Best Fintech Pitch**
  Awarded 1st price at Fintech Stage's event "Fintech War" of over +16 fintech startups plus a 1k€ cash price

- **Winner Adidas Finals Hackathon**
  Created the "Adidasum" ICO for an API data marketplace.

- **MetLife Iberia Financial Inclusion Award**
  Awarded a 4K€ cash price at MetLife Iberia to promote Financial Inclusion.

- **Winner Adidas Hackathon Barcelona**
  Created surveillance system to track and identify customer satisfaction.

Projects

02/20 - present   **Aplikato** — CTO
Created a Nuxt (Vue) web app connected to a Flask/ Postgres backend. Containerized the app with Docker to host it on premise on my private Kubernetes Cluster.

`Vue` `Vuex` `Nuxt` `Kubernetes` `Flask` `Postgres`

12/19 - 01/20   **1++ App** — Full-Stack
Created an Angular Ionic Hybrid App connected to Firebase. Designed NoSQL database architecture. Used RxJS Observables. Used TDD with Jasmine and Karma.

`JavaScript` `Angular 8` `Ionic` `RxJS` `Firebase` `Jasmine` `Material Design`

10/18 - 02/19   **Utility Token** — Blockchain
Created an Ethereum ERC-20 compliant utility token for Cuatre Casas. Created a Node-Express REST API connected to an Ethereum Node to manage Token interactions. Used Truffle and Mocha for Unit-testing.

`JavasScript` `Node` `Express` `REST` `Mocha` `Ethereum` `Solidity` `Truffle`

04/18 - 11/18   **Stamper** — Full-Stack
Created an React-Redux App with an Prisma-GraphQL backend hosted on AWS ECS. Used AWS Cognito for authentification and AWS S3 for storage.

`React` `Redux` `JavaScript` `Prisma` `GraphQL` `AWS-ECS` `AWS-Cognito` `AWS-S3`

04/18 - 02/19   **Boardchain** — Blockchain
Created an React-Redux App connected to a series of Smart Contracts hosted on the Ethereum Blockchain to remotely hold transparent and immutable board meetings.

`React` `Redux` `JavaScript` `Solidity` `Ethereum` `Smart Contract` `Truffle`

10/17 - 04/18   **Alda Chatbot** — Data Science
Created an natural language processor to detect user intents. Connected the Facebook API, Saltedge API and Dialogflow API to create a Chatbot interface able to respond to many financial requests. Hosted serverless microservices as AWS Node and Python Lambdas with a PostgreSQL database as backend.

`Data Science` `NLP` `AWS-Lambda` `PostgreSQL` `Python` `JavaScript` `Node` `Serverless`

10/17 - 04/18   **Alda PWA** — Front-End
Created a React PWA for the Chatbot as UI alternative for Facebbook Messenger.

`React` `Redux` `AWS-Amplify` `AWS-Dynamodb` `Serverless` `AWS-Cognito`

09/16 - 09/17   **WeGoLoco App** — Full-Stack
Created a native iOS App written in Swift. Used AWS-Cognito for authentification, AWS-RDS (PostgreSQL) as a database and AWS-S3 for storage connected via AWS-Lambda Serverless microservices.

`Native App` `Swift` `AWS-Cognito` `AWS-RDS` `AWS-Lambda` `AWS-S3` `PostgreSQL`

02/16 - 08/16   **FuldaCity App** — Front-End
Created a Native App written in React Native with a MongoDB backend.

`React Native` `JavaScript` `MongoDB`

01/16 - 06/15   **Tennisspot** — Full-Stack
Created a Web App for a local tennisclub, which is still used by > 200 Persons. Used LAMP with PHP and MySQL.

`PHP` `MySQL` `JQuery` `LAMP`