

Dirk Hornung, PhD



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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

Professional Experience

- 05/18 - 02/19 **CYSAE** - Legaltech Startup
CTO (2 Developers)
Utility Token for Cuatre Casas
Created an Utility Token, within the Ethereum Blockchain, that allows to buy legal services by paying with a Cryptocurrency.
Stamper
Created a web application that anchors documents in the Ethereum Blockchain, to establish secure contracts.
Boardchain
Developped a web application to remotly hold decentralised board meetings.
- 10/17 - 04/18 **Alda** - Fintech Startup
CTO & Co-Founder (1 Developer)
Alda Chatbot
Created a Fintech Chatbot that serves as a personal financial advisor.
Chatbot UI
Created a mobile app for the Chatbot, which has been integrated in several companies.

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 and Modified Graphene Structure

Awards

- **Imagine Silicon Valley Finalist.**
One of ten finalists of more than 500 applicants to be sponsored for a 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 keep promoting Financial Inclusion.
- **Winner Adidas Hackathon Barcelona**
Created surveillance system to track and identify customer satisfaction.

Projects

12/19 - present	1++ App Front-End	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. JavaScript 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 authentication 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 Facebook 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 authentication, 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