

Dirk Hornung, Ph.D.

City: Barcelona
Date of birth: October 5, 1991
Place of birth: Fulda, Germany
Mobile: +34 695460404
E-mail: hello@drdirk.io
Website: drdirk.io



Dear Senacor,

I am Dirk Hornung, a recently graduated Ph.D. student at the institute of high energy physics of the Autonomous University of Barcelona with 5+ years of experience in leading the technology in different Startups. Within my studies, I researched low-energy QCD and the determination of Standard Model parameters. I developed a C++ fitting routine to extract parameters of theoretical models out of CERN experimental data.

Besides my studies, I am an entrepreneur. During the last year, I developed Smart Contracts in the Ethereum Blockchain and connected them through REST APIs using Node Express for a legaltech. Before I developed a chatbot using Artificial Intelligence for a fintech. We connected our clients through Messenger to their bank accounts and analyzed their banking information using Python. I am furthermore a Full-stack developer with lots of experience developing applications using React as frontend and AWS services as a backend.

Currently I am educating myself on the topic of Artificial Intelligence and Machine Learning, especially in the field of Deep Learning. I recently completed Andrew Ng's Coursera Deep Learning Specialization. Apart from that, I am practising my Tensorflow and Keras skills within python sound wave simulations and active noise cancelling.

Sincerely,
Dr. Dirk Hornung

P.S. I love Tech and would be interested in a position as Technology Consultant.

Professional Experience

May 2018 - Feb. 2019 **CYSAE**

CTO (2 Developers)

Utility Token for Cuatrecasas

Customised an ERC-20 Solidity Smart Contract for a Spanish lawyer agency. Configured and launched an Ethereum Node connected to a Node-Express REST API to consume the token functionality.

Stamper

Developed a React-Redux Web App with an GraphQL-Prisma-MySQL backend hosted on AWS-EC2 docker containers and AWS-S3.

Boardchain

Developed a DAO to decentralise board meetings. The Web App was based on React-Redux backed by Serverless AWS-Lambda, AWS-S3, AWS-Cognito and AWS-Dynamodb.

Oct. 2017 - Apr. 2018 **Alda**

CTO & Co-Founder (1 Developer)

Alda Chatbot

Created a Messenger Fintech Chatbot. Modelled and trained a RNN before switching to the Dialogflow API for the NLP. Created a Serverless Python-Flask-AWS-RDS (PostgreSQL) backend, combining the Facebook and Saltege API to connect and query financial information of our clients.

Chatbot UI

Created React-Redux PWA connected to our chatbot. Integrated the app in various Wordpress and Liferay installations.

Education

- 2019 **Deep Learning Specialisation**
Absolved five classes of the Coursera specialisation of Deep Learning to study Neural Networks, Hyperparameter tuning, Machine Learning projects, Convolutional Neural Networks and Sequence Models.
- 2015 - 2019 **Ph.D., Theoretical Physics**, Autonomous University of Barcelona (Spain) / Aix-Marseille University (France)
Thesis: The QCD Strong Coupling from Hadronic Tau Decays
Supervisor: Dr. Matthias Jamin
Created a numerical chi-squared fitting routine, written in C++ using the frameworks BOOST and ROOT.
- 2014 - 2015 **M.Sc., Particle Physics**, Autonomous University of Barcelona (Spain)
Thesis: 1-Loop Anomalous Dimensions of 4-Quark Operators
Supervisor: Dr. Matthias Jamin
- 2011 - 2014 **B.Sc., Condensed Matter Physics**, Goethe University Frankfurt (Germany)
Thesis: Band Structure Studies of Graphene and Modified Graphene Structure
Supervisor: Prof. Dr. Roser Valentí

Skills

- Data Science** Python, Tensorflow, Keras, Hadoop, Spark, Pandas, Numpy, Matplotlib, SVM, NN, CNN, RNN Mathematica
- Frontend** JavaScript, React, React Native, Redux, Flutter, CSS, HTML
- Backend** AWS, Node, Express, MySQL, PostgreSQL, DynamoDB, Serverless, Flask, Zappa, Django
- Blockchain** Ethereum, Solidity, Smart Contracts, Tokens economy, Decentralised Identity, ICOs
- Prototyping** Arduino, C++, Fusion 360, 3D-Printing, CNC, Electronics
- Marketing** Photoshop, Illustrator, Final Cut Pro, SEO, SEM, Wordpress, PHP
- Soft** Leadership, Public Speaking, Motivating, Mentoring, Confidence, Energy

Awards

June 2019	Imagine Silicon Valley Finalist. One of ten finalists of more than 500 applicants who sent in a one minute video (https://www.youtube.com/watch?v=Om1DGAa7Cgw) to be sponsored for a Silicon Valley trip.
February 2018	Winner: Imagine Developer Dreamer. Got selected to participate in the "Imagine-Express-Train".
September 2018	Best Fintech Pitch Awarded 1st price at Fintech Stage's event "Fintech War" of over +16 fintech startups plus a 1k€ cash price
July 2018	Winner Adidas Finals Herzogen-Aurach Created the "Adidasum" ICO for an API data marketplace to democratise data and connect data provider, data scientists and data consumer.
May 2018	MetLife Iberia Financial Inclusion Award Awarded a 4K€ cash price at MetLife Iberia to keep promoting Financial Inclusion.
April 2018	Winner Adidas Hackathon Barcelona Created a system that could uniquely identify faces and track emotions. We trained a model to predict the probability of a client purchasing a certain item in an Adidas store.

Languages

German:	native
English:	proficient
Spanish:	proficient
French:	proficient
Hungarian:	basics