Dirk Hornung, Ph.D.

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Dear Jobteaser,

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 next to performing lots a data analysis using tools like pandas, matplotlib and scipy.

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, where I was responsible for the natural Language processing. I am furthermore a Full-stack developer with lots of experience developing applications using React as frontend and Node in combination with NoSQL databases 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 canceling.

Sincerely,
Dr. Dirk Hornung

P.S. I am a native German, but also fluent in English, French and Spanish. Visit drdirk.io to get to know me better.

Professional Experience

since July 2019	**Sharify** **CTO & Backend Developer** Scaling the backend of Sharify, a Startup connecting thousands of users on a live map. Architecting NoSQL databases and Node Microservices.
May 2018 - Jan. 2019	**CYSAE** *CTO* (2 Developers) **Utility Token for Cuatre Casas** 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-ERC 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 Saltedge 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, Tensorflow, SVM, NN, CNN, RNN Mathematica
Frontend	JavaScript, React, React Native, Redux, Flutter, CSS, HTML
Backend	AWS, Node, Express, MySQL, PostgreSQL, Node, 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