

Hesam Ossanloo (Chief Product and Technology Officer)

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WORK EXPERIENCE (Last 10 Years)

SkogApp/TAVANA

Oslo, Norway

Cofounder and Chief Product & Technology Officer

Jan 2023 – present

- **SkogApp:** Reducing the time to create the Forestry Plan from two years to 30 minutes, by implementing web/mobile apps and a building a pre-trained model to detect trees from satellite images and ground-truth data. This helps foresters earn more out of their forest by optimizing operations, forest inventory, and carbon-crediting.
- **TAVANA:** Saving 30 minutes to 1 hour per day per doctor for writing patient notes and performing medical coding, by implementing a web app and building the first medical LLM in Norwegian. (Collaborated with Harvard Medical School and MIT).

Antler

Oslo, Norway

Entrepreneur in Residence

Feb 2023 – May 2023

- Participated in a rigorous three-month startup program provided by Antler, focused on building and scaling early-stage ventures, and successfully secured pre-seed investment.
- Won the Google Hackathon title for most secure and scalable technical cofounder in the program.

Spark Sport NZ

Auckland, New Zealand

Head of Engineering

Feb 2022 – Jun 2023

- Led a team of 15 engineers, ensuring scalable and secure architecture for applications reaching up to 1M users.
- Implemented CI/CD and automated testing, enhancing product quality and reducing deployment time and cloud-computing costs by 30%.
- Fostered a collaborative team environment, improving team satisfaction and retention rates.

Mercury NZ Ltd.

Auckland, New Zealand

Solution Architect / Tech Lead (Contractor)

Jul 2021 – Feb 2022

- Led a team to build a project to replace a legacy system, by designing microservice architecture and implementing scalable, secure RESTful APIs using serverless technologies, which led to a 40% cost reduction and improved performance.
- Saved the company a potential 2 million dollar loss, by figuring out the compatibility issue of the new energy platform (Bidgey) and the current tech-stack.

Centrality.ai Ltd. / P^werFinance

Auckland, New Zealand

Solution Architect / Tech Lead (Contractor)

Aug 2020 – Aug 2021

- Led a team of intermediate developers, balancing 50% hands-on tasks such as architecture design and code reviews with 50% leadership tasks, including DevOps collaboration and project production oversight using TDD, BDD, CI/CD, and Agile methodologies and designing the enterprise architecture.
- Interacted with stakeholders, product owners, and designers to ensure business requirements were accurately mapped to technical assets and skill sets, ensuring efficient, secure, and automated product delivery.
- Implemented the whole banking system using Blockchain technology, including encrypted minting & burning assets for the customers on the network.

Propellerhead Ltd.*Senior Fullstack Developer***Auckland, New Zealand**

Oct 2018 – Aug 2020

- Mentored junior developers and collaborated with stakeholders and designers to develop and maintain cloud-based mission control software for Auckland Transport, ensuring real-time data flow and fleet management.
- Reduced public transport messaging/rerouting process by 50%, by implementing a Kafka and Redis-based and live GPS tracking solution with retry mechanism, to automatically send messages to desired stations.
- Developed and maintained internal applications, including a badge framework for tracking career progression, a spending application, and a revenue forecasting tool.

INFOMOTION GmbH*Senior IT Consultant (Contractor)***Frankfurt, Germany**

Jun 2018 – Oct 2018

- Automated data extraction from SAP reports, by implementing the “Easy Cockpit” portal, which led to a more user-friendly data presentation for managers and saved time.

OBJECT ECM GmbH*Senior IT Consultant***Zurich, Switzerland**

Apr 2016 – Jun 2018

- Led a team of junior and intermediate developers, managing various projects and ensuring alignment with stakeholder requirements.
- Reduced construction application processing time by 50%, by implementing an internal web portal and a workflow engine for the Thüringer Aufbaubank, which led to 50% higher state-based support for the citizens.

Sopra Steria GmbH*Fullstack Developer***Hamburg, Germany**

Feb 2014 – Apr 2016

- Reduced credit fraud by 40%, by implementing a web-based fraud prevention tool and rule-engine for banks and investment companies, in a team of 3 developers.

NTT DATA Deutschland*Web Developer***Munich, Germany**

Nov 2012 – Feb 2014

- Optimized after-sales communication for BMW and Audi through implementation of integrated web applications, resulting in a 30% reduction in waiting times and operating costs.

PROJECTS

Project SkogApp (Individual project):

- Development of a responsive web application (React and TypeScript) where foresters can log in via OAuth 2.0. Based on their roles, users can use a 6-step wizard to find and analyze their forest on the map.
- Design of a microservice architecture where AWS Lambda functions (Python and Node.js) download high-resolution satellite or aerial images of the desired property via REST APIs. A pre-trained ML model analyzes the image and creates a forestry plan and a bio-growth model of the forest.
- Personal responsibility for the microservice architecture, product design and REST APIs in the backend as well as for using PostgreSQL/PostGIS and Firestore as databases.

GitHub Source Code:

- <https://github.com/hesamossanloo/skogapp-api>
- <https://github.com/hesamossanloo/skogapp-frontend>

Project Spark Sport (Team project):

- Built and managed a team of 7 developers and 8 testers to build a live sports streaming app for 16 different platforms (Web, iOS, Android, 13 different smart TVs and streaming devices like Chromecast, Fire TV).
- Used React and TypeScript for the frontend and Node.js and TypeScript for the backend.
- Designed microservice architecture, REST APIs, integration with Snowflake, PagerDuty, DataDog and AI-based anomaly detection for monitoring and logging.

VOLUNTEER EXPERIENCE

Planetary Transportation Systems GmbH

Data Scientist/Senior Developer

Berlin, Germany

Sep 2017 – Feb 2020

- Semantic search research for the 'Mission to the Moon' project, an initiative from the Google Lunar X-Prize to put a lunar rover on the moon.
- Accomplished secure data transmission, by building a mission control software which led to secure communication between the Audi lunar Quattro, the Autonomous Landing and Navigation Module (ALINA), and the Earth.

EDUCATION

PhD. Informatics (Part-time, incomplete)

Hochschule Darmstadt – University of Applied Sciences

Darmstadt, Germany

Jul 2016 – Dec 2022

- Focus: Semantic Web, Ontology and Taxonomy, Machine learning, AI, ETL, Search result clustering, Linked Open Data, Information Retrieval, Semantic Information Visualization.

M.Sc. of Computer Science (Dual Master)

Hochschule Darmstadt / Wisconsin Platteville USA

Darmstadt, Germany

Oct 2010 – Oct 2012

- Focus: Enterprise Architecture, Fullstack development (Java, JS, Ruby), Business Process Optimization.

SKILLS AND TECHNOLOGIES

- **Programming Languages:** JavaScript (fluent), TypeScript (proficient), Python (proficient), Java (proficient).
- **Web Technologies:** Node.js (fluent), React JS (proficient).
- **Test Frameworks:** Cypress (proficient), Jest (fluent), Selenium (prior experience), Cucumber (prior experience), Mocha and Sinon (proficient).
- **Cloud providers:** AWS (fluent), Azure (fluent), GCP (proficient).
- **AI Technology:** LLM (proficient), Semantic search (fluent), Ontology (fluent).
- **DevOps Tools:** CI/CD (fluent), Docker (fluent), Kubernetes (proficient), Jenkins (prior experience), Terraform (prior experience), Serverless (fluent), AWS/Azure DevOps (fluent), GitHub Actions (fluent), CircleCI (prior experience).
- **Messaging Technologies:** Kafka (proficient), Redis (proficient), SQS (fluent), SNS (fluent).
- **Databases:** MySQL (proficient), PostgreSQL/PostGIS (proficient), MongoDB (prior experience), Firestore (proficient), DynamoDB (prior experience).
- **Principals:** Enterprise Architecture (fluent), RESTful APIs, Agile Methodologies, TDD (fluent), BDD (fluent), OAuth 2.0 (fluent).

- **Soft Skills:** Leadership, Team Building, Critical Thinking, Problem-Solving, Communication, Mentoring, Collaboration, Public speaking.

PUBLICATIONS

- Bernhard G. Humm, Hesam Ossanloo: Domain-Specific Semantic Search Applications: Example SoftwareFinder. In: Thomas Hoppe, Bernhard G. Humm, Anatol Reibold (Eds.): Semantic Applications - Methodology, Technology, Corporate Use. pp. 243-258. Springer Verlag, Berlin, 2018. ISBN 978-3-662-55432-6.
- Bernhard G. Humm, Hesam Ossanloo: Cost-Effective Semi-Automatic Ontology Development from Large Domain Terminology. In: Udo Bleimann, Bernhard Humm, Robert Loew, Stefanie Regier, Ingo Stengel, Paul Walsh (Eds): Proceedings of the Collaborative European Research Conference (CERC 2017), pp 73-82, Karlsruhe, Germany, 22-23 September 2017. ISSN: 2220-4164.
- Bernhard G. Humm and Hesam Ossanloo (2016). A Semantic Search Engine for Software Components. In: Pedro Isaías (Ed.): Proceedings of the International Conference WWW/Internet 2016, IADIS Press, pp 127-135, Mannheim, Germany, ISBN 978-989-8533-57-9.

LANGUAGES AND HOBBIES

- Languages: English (Fluent), German (Fluent), Farsi, Persian (Native), Norwegian (Basics), Arabic (Basics), Turkish (Basics).
- Hobbies: Solving LeetCode puzzles, Reading scientific books, mentoring younger developers, running (I used to be a professional 800m Track & Field Runner), Football, Badminton, Ping-Pong, Painting, Listening to Music, Playing the Harmonica, doing Standup Comedy, Watching Movies & TV Shows.