Nasr **Kasrin (PhD)**

SOFTWARE ARCHITECT · PRODUCT STRATEGIST

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Summary

Versatile software architect and product strategist with a history of guiding successful projects spanning various domains (including data architecture, social networks, mobile apps, games, robotics, and AI), team sizes ranging from 2 to 10 members, and diverse settings, from agile B2C environments to R&D projects backed by €3.5 million in public funding.

With expertise at the intersection of engineering and product leadership, I excel in delivering cutting-edge solutions that drive business growth and enhance user experiences *(See n42r.github.io for more)*.

Projects

Muze AI
OPEN SOURCE SOFTWARE

2023 - 2024
github.com/n42r/muze-ai

- Conceptualized and developed an early AI/LLM music discovery tool, bypassing the reliance on Spotify's music recommendation metadata.

Guestrrday
OPEN SOURCE SOFTWARE

2022 - 2023
github.com/n42r/guestrrday

- Engineered an open-source music tagging tool capable of processing over 20,000 items, enhancing music organization and accessibility.

The Basin Network (Doctoral Project)
ARCHITECTURAL MODEL

2019 - 2023
n42r.github.io/phd

- Conceived and implemented a novel architectural pattern for data cataloging, improving on data mesh and data space models in 3 repects: precision, level of detail, and generalization, culminating in the award of a PhD with distinction.
- Published findings in 2 journals, contributing to advancements in the field of data management.

SIMUTOOL Data Lake
SAAS (EUROPEAN UNION PUBLICLY FUNDED PROJECT)

2015 - 2019
github.com/simutool

- Built a data lake SaaS for a consortium of 8 manufacturing companies, cutting turnover time by 30% by fostering data-driven cooperation.
- Architected the application, developed the back-end, and led an agile team to develop various value-added clients which led to a 90% user satisfaction and the success of the project based on the evaluation of the EU committee of experts.

Greetings Studio
SOCIAL NETWORK/IOS MOBILE APP (B2C)

2012 - 2014
n42r.github.io/gs

- Directed the agile development of a social network and Apple iOS mobile app facilitating the creation and sharing of E-cards and images, optimizing user engagement leading to 10-fold growth in user base.
- Architected the for scalability and maintainability, leading to a reduction of 40% of extra development that was originally spent circumventing technical architecture debt.

Tawla (Backgammon)
GAME/IOS MOBILE APP (B2C)

2011 - 2013
n42r.github.io/tw

- Elevated app ratings from 3 to 4.5/5 stars by the implementation of advanced AI players, enhancing gameplay dynamics.
- Achieved a 10% increase in positive reviews due to devising and implementing a sophisticated random number generator for the dice algorithm, which resulted in more enjoyable gameplay.

ArtSapiens 2D Soccer
AI/ROBOTICS SOFTWARE TO COMPETE IN THE 2011 INTERNATIONAL ROBOCUP COMPETITION

2010 - 2011
ssim.robocup.org

- Co-founded and co-led a team of 10 in developing robotics/AI software to compete in the International RoboCup Competition, which qualifications and earned a spot in 2011 competition in Kuala Lumpur, Malaysia.

Work Experience

Research Associate (Architect | Team Lead)
2015 - 2020

University of Bamberg (Third-party Funded Project)
Bamberg, Germany

- Directed a 4-year project to develop a data management SaaS for a €3.5 million 8-company EU manufacturing project, optimizing data discovery, collaboration, and turnaround time, and resulting in enhanced operational efficiency *(See github.com/simutool for more)*.
- Cultivated close relationships with 10+ external partners, facilitating deep domain understanding and precise requirements identification.
- Engineered a read-heavy, horizontally scalable SaaS, ensuring seamless operations and future-proof architecture (ex., stateless nodes).

Team Leader | Software Architect | R&D Engineer
2011 - 2014

TayaIT
Cairo, Egypt

- Directed agile technical teams, ranging from 2 to 5 members, in the development of two enduring social media/mobile products, driving perpetual augmentation of app rankings (4.5 starts) and a 10-fold increase in user engagement (See 'Greetings Studio' and 'Tawla' in Projects).
- Reduced feedback-development cycle times by 25% by coordinating cross-functional collaboration between technical, business, and UI/UX teams, streamlining workflows and fostering tighter cooperation and heightened productivity.
- Saved the company over 10-man months by investigating emerging technologies and alternative project paths and advising the CEO in adopting better paths or avoiding dead-ends and sub-optimum paths.

Skills

DEVELOPMENT	Python, Docker (multi-container), Linux CLI, git, and low-/no-code (bubble.io). Formerly, C++, Lisp, Java.
DATABASES	MongoDB, Neo4j, SQL, Google Firebase, and Resource Description Framework (RDF) / Semantic Data.
LEADERSHIP	Empathetic leadership and coaching, agile/lean project leadership, change management.
ARCHITECTURE	Distributed architectures, modular monoliths (clean/hexagonal architecture), HTTP API interface design.
DOMAIN EXPERTISE	Data integration, governance, interoperability, standardization, cataloguing, domain modeling, robotics/AI.
SOFT SKILLS	Critical and conceptual thinking, collaboration/teamwork, clear communication of complex concepts.

Education

Otto-Friedrich-Universität Bamberg
2020 - 2023

PhD. (Dr. rer. nat.), Faculty of Information Systems & Applied Computer Science
Bamberg, Germany

The German University in Cairo
2009 - 2010

MSc. (Masters of Science), Faculty of Computer Science & Engineering
Cairo, Egypt

The German University in Cairo
2003 - 2008

BSc. (Bachelors of Science), Faculty of Computer Science & Engineering
Cairo, Egypt

Publications

Full list available at: scholar.google.com/citations?user=JgS4-1cAAAAJ

Languages

ENGLISH	Fluent
ARABIC	Fluent
GERMAN	B1 Telc Certified (Good Understanding, Basic Speaking)