**MASM KAVN, PhD** *SOFTWARE ARCHITECT · PRODUCT STRATEGIST* 96050 Bamberg, Germany  
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**Summary** Software architect with extensive experience in leading successful projects across diverse domains, team sizes, and settings. Expertise lies at the intersection of engineering and product leadership, with a track record of delivering innovative solutions. Passionate about leveraging technology to drive business growth and enhance user experiences.

**Key Skills**

* **Software Development:** Python, Docker, Linux CLI, git, UML
* **Database Management:** MongoDB, Neo4j, SQL, Google Firebase, RDF
* **Project Leadership:** Agile/Lean methodologies, team management, change management
* **Domain Expertise:** Data integration, data cataloging, domain modeling
* **Soft Skills:** Critical thinking, collaboration, problem-solving, communication

**Professional Experience**

**University of Bamberg, Bamberg, Germany**  
*Research Associate (Architect | Team Lead)*  
2015 - 2020

* Led a team in developing a data lake SaaS for a 3.5 million Euro EU manufacturing project, enhancing data discovery and collaboration.
* Strengthened relationships with end-users, leading to better understanding of domain requirements and improved solutions.
* Designed scalable systems and supervised developers with agile practices to ensure continuous growth.

**TayaIT, Cairo, Egypt**  
*Team Leader | Software Architect | R&D Engineer*  
2011 - 2014

* Led agile teams in developing social media/mobile products, resulting in increased app rankings and user base.
* Fostered cross-functional collaboration, reducing cycle times by 30% and increasing productivity.
* Incorporated state-of-the-art technologies into the tech stack, such as Protege/semantic web.

**Projects**

**Muze AI** (Open Source Software)  
github.com/n42r/muze-ai (2023 - 2024)

* Developed an AI-driven music discovery tool, independent of Spotify's metadata, enhancing user experience.

**The Basin Network** (Doctoral Project)  
n42r.github.io/phd (2019 - 2023)

* Designed a novel architectural pattern for data cataloging, earning a PhD with honors.

**Education**

**Otto Friedrich Universität Bamberg, Bamberg, Germany**  
*PhD in Information Systems & Applied Computer Science* (2023)

**The German University in Cairo, Cairo, Egypt**  
*MSc in Computer Science & Engineering* (2010)  
*BSc in Computer Science & Engineering* (2008)

**Publications**

* "Data Sharing Markets for Integrating IoT Data Processing Functionalities." CCF Transactions on Pervasive Computing & Interaction, 2021.
* "Semantic Data Management for Experimental Manufacturing Technologies." Datenbank Spektrum, 2018.
* "Focused Belief Revision as a Model of Fallible Relevance Sensitive Perception." Künstliche Intelligenz, 2010.
* "High-Level Perception as Focused Belief Revision." European Conference on AI (ECAI), 2010.

**Languages**

* English: Fluent
* Arabic: Fluent
* German: B1 Telc Certified (Good Understanding, Basic Speaking)