|  | | |  | Mahdi Amini |
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| Professional Skills **Problem solving:** Brainstorming, Deciding factor determination, Naming, …  **Software architecture:** Design, Presentation, Patterns, (non-)Functional requirement analysis, Microservices, CQRS, Saga, Datamesh, Event sourcing  **Reactive systems:** Stream processing(Kafka Streams), Event-driven design  **Java:** Spring ecosystem, Reactive programming, JavaFx, Maven, Gradle, …  **Protocols and standards:** WebSocket, MQTT, AMQP, STOMP, Oauth, WebRTC, WebAuthn, OpenID, SSE, JWT, Restful, RSocket, …  **Software Testing:** TDD, JUnit5, Mockito, Test Containers  **Frontend:** Flutter, Android, React.js  **Infrastructure and tools:** Docker, Kubernetes, Nomad, RabbitMQ, Neo4J, Elasticsearch, MongoDB, PostgreSQL, Prometheus, Grafana,  **AI:** scikit-learn, Simple machine learning models, LLM integration with Java  **Cloud provider:** GCP, AWS  **CI/CD**: Github actions, Jenkins  **Language:** Persian (Native), English (IELTS **7**/9), Java 22, , Erlang, Python, Dart, Groovy, Typescript  **Sport:** Volleyball  **Driving:** AM/B Swedish Driving license Experiences **Software Engineer at** [**Nordnet**](https://www.nordnet.se/)Apr 2021 - present  I was responsible for full stack delivery of reliable, resilient and secure login and authentication solutions. I mainly worked in mob programming style. My major contributions in Nordnet:   * Architecture of the authentication parts of Nordnet's AML flows. * In depth security analysis of 3rd party authentication solutions. * Delivering a challenge based RSA [login method](https://assets.ctfassets.net/f5rlrsannule/1x76yZy3wD9yr1w0XpNDQt/db40d2d07feae8a54c9d12eb2975ffac/Nordnet_login_whitepaper.pdf). * Holding [educational workshops](https://www.youtube.com/channel/UCrxRrOLow4lR3eMFHrHF1wA/featured) and presentations. * Implementing a WebAuthn based login method. No more passwords and usernames but biometrics, passkeys and Yubikeys. * Resolving (deemed impossible) decade old technical debts and security issues in legacy systems. * On-prem to cloud migration, which involved reworking applications' architecture to be cloud native. * Active in R&D and hackdays. Example: AI powered on-call assistant. * Advocate of incremental development, decoupling, product first thinking, and reactive systems. * Regularly taking part in the team's on-call duties.   **Backend developer at** [**Cabonline**](https://www.cabonline.com/)Oct 2018 - Mar 2021  As a backend developer, I was responsible for turning (non-)functional requirements into implementation of microservices while considering scalability, extensibility and availability. Pair programming and extensive testing were part of my daily routine. I always had an eye on what can be automated, upgraded and improved. My major contributions in Cabonline:   * Development of an event sourcing based vehicle dispatching service (using Kafka Streams) * Development of a token based authentication solution for travelers inspired by Oauth2 standard * Refactoring servlet based applications to reactive stack * Advocate of Event-Driven solutions  Educations **MSc. of Computer Science** Sep 2018 - 2019 and Jan 2021 - Apr 202  **Uppsala University, Sweden**  Thesis: [Stateful-Geofencing-Faas](https://github.com/bmd007/statefull-geofencing-faas)  A stream processing and microservices based system that allows high scale low latency geofencing. This platform is an implementation of the stateful-function-as-service idea.  Supervisor: [Prof. Salman Toor](https://katalog.uu.se/profile/?id=N7-398)  **BSe. of Information Technology** Sep 2013 - Jul 2018  **Isfahan University of Technology, Iran**  Thesis: Smart grid consumption optimization without compromising consumers’ privacy. Novelty of this project was to use a homomorphic cryptosystem to preserve privacy.  Supervisor: [Prof. Mohammad Hossein Manshaei](http://www.manshaei.org/)  **Teaching Assistant:**  Topics I taught: Spring, Hibernate, JSF, REST API design |
|  | Innovative, outside the box thinker, who is undaunted by failure. (PI test result). | |
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|  | website icon | [Medium](https://medium.com/@bmd007)  [Github](https://github.com/bmd007/)  [Stackoverflow](https://stackoverflow.com/users/3118741/mahdi-amini) |
|  | Side Projects  **Mentorship Program**  Helping entry level developers and newly graduated students to become a software engineer, land a job, and move toward seniority.  [**Reactiveland**](https://github.com/bmd007/reactiveland)  A repository for learning reactive programming.   * Educative text * Challenges * Recorded Workshops (youtube)   [**Scalable geospatial matchmaking**](https://github.com/bmd007/Wonderland)based on reactive systems and stream processing.  [**WebAuthn workshop**](https://github.com/bmd007/webauthn_workshop)  A playground to learn WebAuthn protocol and its related technologies.  [**Swedish BankID gateway**](https://github.com/bmd007/swedish-bankid-gateway)  An integration to Swedish BankID APIs, and exposing them as one SSE endpoint. | |  |