Tamás BENKE

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Profile

Well established senior software developer with more than 25 years of international IT experience, and experience in Project Management with focus on software architecture, design and development. Professional expertise spans the full software development life cycle including requirements analysis, software design, implementation, testing, deployment and maintenance. Also having more than 15 years experience in general managerial activities, coaching and mentoring.

Key attributes

- Experience in large-scale international IT projects in the fields of design and development in C/C++, Java, JavaScript and related technologies.
- Capable of efficiently working in complex IT system environments.
- Capable of quickly learning and evaluating new technologies, and bringing innovative ideas into the products.
- Profound experience with new technologies: HTML5/JavaScript mobile and Web UI front-ends, Node.js, NoSQL DBMS.
- Excellent analytical and problem solving skills.
- Mentoring team leaders, architects and developers.
- Good communication skills.
- Responds quickly to customer needs.
- Good team player.

Work experience

2019 – present **Lufthansa Systems Hungaria, Budapest, Hungary** **Competence Lead, R&D**

- Architecting and developing a prototype of a high-throughput revenue-accounting system, based on a cloud-native, event-driven, streaming architecture. Benchmarking and evaluating several technologies.

Technologies used:
JavaScript/ES6, Node.js, Golang, JavaScript, Kotlin, Quarkus, Python/Streamlit, NATS messaging, Pulsar, PostgreSQL, Azure AKS, Kubernetes, Docker, Linux, GitHub Actions.

- Developing a digital assistant prototype for Operations Control personnel. The assistant works as chatbot, and reachable via voice control interface.

Technologies used:
JavaScript/ES6, Node.js, Knowledge Graphs (Cayley, Grakn.AI), NATS messaging, Text-to-speech, Speech-to-text, Azure AKS, Kubernetes, Docker, Linux, GitHub Actions.

- Developing a microservice adapter to a reservation system in server-side JavaScript.

Technologies used:
JavaScript/ES6, Node.js, AWS, Kubernetes, Docker, Linux, Jenkins.

- Architecting and developing a prototype for an intelligent robot assistant with an 3D VR/AR avatar, voice recognition, and speech capabilities.

Technologies used:
Pepper robot simulator, Knowledge Graphs (Cayley, Grakn.AI), JavaScript/ES6, Node.js, ReactJS (VR/AR), ThreeJS 3D, RxJS, WebSocket, NATS messaging, Text-to-speech, Speech-to-text, Azure AKS, Kubernetes, Docker, Linux, Jenkins.

- Designing and developing an on-board, multi-player real-time quiz game development for passengers.

Technologies used:
JavaScript/ES6, Node.js, ReactJS, RxJS, WebSocket, NATS messaging, Couchdb, AWS, Azure AKS, Kuberrnetes, Docker, Linux, Jenkins.

2015 – 2018 **Lufthansa Systems Hungaria, Budapest, Hungary** **Senior Software Architect**

- Scouting, evaluating new, innovative technologies for product development.
- Architecting, designing and developing cloud based, distributed systems (JavaScript based server side solutions, Microservices, NoSQL databases, HTML5/JavaScript based front-ends, etc.).

1

- Architecting and developing an Intelligent travel assistant mobile application, including sensors recording and signal analysis, pattern recognition, motion event detection. Developing a predictive engine, using R and Python.
- Developing tools to significantly increase team productivity (rest-tool, rapid application development, etc.).

Technologies used:
JavaScript/ES6, Node.js, R, Python, ReactJS, mocha, Mongodb, RabbitMQ, Heroku, AWS, Docker, Linux, CodeShip.

- Architecting, designing and building the software and hardware components of a tennis robot for SuperCoach LLC (as a hobby project).

Technologies used:
C, ATMega328, Arduino IDE, gnu C, RS485, EAGLE, Raspberry Pi, JavaScript/ES6, Node.js, ReactJS, mocha, Bootstrap, Linux.

- Mentoring trainees and young professionals in the following topics:

- **3D Cargo plane LoadPlan**: interactive 3D cargo Airplane visualisation with load planning capabilities for the NetLine Load product of Lufthansa Systems, incl. gesture control.
  Three.js, Blender, JavaScript, Leap Motion

- **Eye Tracking**: Using eye tracking devices for human-computer interaction and for improving graphical user interfaces.
  EyeTribe, SMI, JavaScript, C++

- **Instant Messaging**: JavaScript implementation of basic tools and scenarios to do instant messaging via the XMPP (or MQTT) protocol.
  ejabberd, Strophe.js, XMPP, JavaScript, Erlang

- **Using SVG Widgets in User Interaction:** Scouting, discovering JavaScript SVG libraries. Collecting ideas, on how to use SVG widgets for human-computer interactions.
  CSS, SVG, HTML, D3, JavaScript

- **Robot motion control simulation:** A simulation environment for an autonomous moving robot, including the motion control and 3D visualization.
  MQTT, Blender, Three.js, Node.js, Websocket

2011 – 2015   **Lufthansa Systems Hungaria, Budapest, Hungary**   **Head of Continuous Improvement**
CTO responsibilities, innovation lead, knowledge management (direct report of CEO).
- Architecting, designing and developing prototypes with new, innovative technologies (JavaScript based server side solutions, NoSQL databases, HTML5/JavaScript based front-ends, etc.).
- Developing tools to significantly increase team productivity (rest-tool, rapid application development, etc.).
- Implementing Lean in software development projects, and continuously improving team working methods.
- Support the LSY CTO to standard technologies and development methodologies (UI frameworks, DevOps, etc.).
- Scouting, evaluating new technologies, regularly sharing new learnings with the architect forum.
- Supporting HR in strategic HR talent management (Young Professional Programme, Team Excellence Programme).
- Writing technical and soft-skill training materials and holding trainings.

Technologies used:
JavaScript, Node.js, ExtJS, ReactJS, Fluxx, mocha, HTML5, CSS3, Sass, Compass, Mongodb, CouchDB, Linux.

2007 – 2011   **Lufthansa Systems Hungaria, Budapest, Hungary**   **Head of Business Solutions Business Unit**
Leading a business unit with a financial responsibility of 1M EUR including management of cc. 40 employees
- Direct report to the CEO.
- Financial planning, controlling and customer/business development.
- Managing and supervising software development projects.

2006 – 2007   **Lufthansa Systems Hungaria, Budapest, Hungary**   **Team Leader, Project Manager, Architect**
Team leadership, project management, architecture and design in several product development and customer projects:
- managing the team of cc. 15 employees,
- Customer Survey System for Lufthansa passengers,

2

- web-based price distribution work-flow system for Lufthansa Process Management,
- reporting system module for Star Alliance operations and Star Alliance tools (SSIM Checker, Fleet Assigner, etc.).

Java/JEE, PHP, Windows

| 2002 – 2006 | **Lufthansa Systems Hungaria, Budapest, Hungary** | **Software Developer** |

Project management, architecture, design and software development in product development and customer projects.
C++, Python, Java, Unix, WinCE, PalmOS, Windows NT, Win9X

| 2001 – 2002 | **Lufthansa Systems Hungaria, Budapest, Hungary** | **Software Developer** |

Software development in a product development project.
- Developing work packages and modules of the Netline/Plan product.

C++, HP-Unix, Windows NT, Win9X

| 1988 – 2001 | **VEGA Kft** | **Entrepreneur/owner** |

General Management, project management, software design and development in customer projects.
- Developing a high level, general purpose control system for industrial painting, welding and assembly robots.
- Developing compilers and interpreters for high level robot control languages (VAL, VAL2), and web based applications.
- Administering Linux servers (dial-up services, firewalls, web, ftp, DNS and RealMedia servers, mail gateways, etc.).

C/C++, Perl Python, Linux/Unix, Windows NT, Win9X

| 1986 – 1987 | **Megamicro, Virtual Graphixx, etc.** | **Software Developer** |

Software development in product development projects
C/C++, TclTk, OpenGL, OpenInventor, Linux/Unix, Windows NT, Win9X

Education

| 1998 - 2000 | **Informatics Engineer** |
| | Dennis Gabor Technical College, Budapest |

Professional skills & experiences:

Requirements:	UML, Use Cases, User Stories, Experience Mapping.
Technologies:	Node.js, CouchDB, MongoDB, Redis, Neo4J, MySQL, PostgreSQL, Apache, Tomcat.
Version control:	Git, Mercurial, Subversion.
Programming languages:	Golang, JavaScript, C/C++, Python.
Operating systems:	Linux, Windows.
Standards & methodologies:	ITIL, IPMA, PMI, RUP, SCRUM, Lean, Kanban.
Industries:	IT, Airline.
Other special skills/knowledge:	Micro-controller programming. Electronic circuit design, Fundamental knowledge on robotics.

Professional certifications

IPMA B level certificate of project management

Training courses

Project Management, IPMA trainings (assessor training too)
Communication and Presentation Skills
Situational Leadership
Solution Focused Coaching, Mentoring

Language skills

| Hungarian | Native |
| English | Fluent |

Personal Data:

Date of birth:	1963
Nationality:	Hungarian
Family Status:	Married (two children)
Hobbies & interests:	Microcontroller programming (AVR, Arduino), robotics, gardening, kendo, yoga.

3