

## Marek Ventur

Software Development Engineer

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I have worked for different companies and industries, such as [IBM](#), [Last.fm](#) and gaming startup [Gamevy](#). At [Amazon](#) I have worked both for their retail branch and in [AWS](#), as part of its [machine learning org](#).

My experience goes all the way from working on the custom large-scale database backends, to developing games, leading UI/UX projects and designing ML systems. I am comfortable working between teams and roles and I love picking up new skills.

In my spare time I'm part of the team that designs and builds the increasingly complex electronical conference badges for the [Electromagnetic Field](#) hacker camp.

### Skills

- **Backend Development:** Java, Kotlin, Python, NodeJS
- **Frontend Development:** React, JS/CSS/HTML, WebGL
- **Data:** PostgreSQL, Hadoop, Redshift
- **ML:** PyTorch, fastai, pandas
- **UI/UX:** UI Design, user research, accessibility, usability, i18n
- **HTTP infrastructure:** Load balancing, websockets, high-throughput architectures
- **Operations:** Unix, CD, monitoring, high-severity on-call
- **Project Management:** Product ownership, Client communication, Resourcing, Prioritisation
- **Languages:** English, German, Spanish (beginner)

### Selected projects (the ones I can talk about)

- **Anomaly Detection:** Prototyping, designing and launching CodeGuru Profiler's [Anomaly Detection](#) feature, which detects anomalies in time series.
- **Launching an AWS service:** Building, launching and operating [Amazon CodeGuru Profiler](#). Leading UX and UI work to improve usability and comprehension of data visualization
- **Transactional product database:** Worked on large scale, low latency data store that acted as an entry point to Amazon's product pipeline running on a 4-digit-size fleet of hosts and DynamoDB table that ranked in the Top 5 of all DynamoDB tables world-wide. Extensive re-design of the internal data structure and migration of storage format.
- **Rohrpost:** PubSub-to-Websocket server build for one of Gamevy's multiplayer games. Designed to separate long lasting websocket connections from backend services and to handle automatic load balancing, server restarts and backend handover during deploys and failures - [github.com/Gamevy/rohrpost-server](https://github.com/Gamevy/rohrpost-server)
- **Realtime Scrobbles:** How many users are listening to what music in which country? Second-level-resolution of Last.fm's "currently listening" data fronted by a custom load-balancing infrastructure
- **PIXI Packer:** Assets packer focused on small download sizes and speed. Reduced build time of Gamevy's games by 50% - [github.com/Gamevy/pixi-packer](https://github.com/Gamevy/pixi-packer)
- **Monte Carlo:** Game simulation framework designed to speed up testing of new game concepts - [github.com/Gamevy/monte-carlo](https://github.com/Gamevy/monte-carlo)
- **Tilda Mk2, Mk3 and Mk4:** Custom designed (and fully working) PCBs used conference badges for UK's biggest hackers and makers gathering - [blog.emfcamp.org](http://blog.emfcamp.org)

### Employment history

#### AWS, Machine Learning (May 2019 - Present), London

Software Development Engineer

Developed and launch Amazon CodeGuru Profiler

- Leading **UX/UI** for the AWS console component and the profiler visualizations.
- Prototyped, developed, designed and launched **anomaly detection** feature
- Day-to-day running of services, including **on-call** support

#### Amazon (Oct 2017 - May 2019), London

Software Development Engineer

Working on services that enable Amazon's massive product catalog

- **Design and implementation** of new features.
- Day-to-day running of services, including **on-call** support
- **Operations and tooling**
- **Trouble shooting and support** in one of the worlds most complex product pipelines

### **Gamevy (Aug 2013 - Sep 2017), London**

Senior Developer and Product Lead

As the first non-founder to join Gamevy I've worked on game design, HTML5 frontends, backend infrastructure and operations

- **Developing game concepts** for the majority of Gamevy's games to date.
- **Project management** from customer request to delivery
- Creating playable **prototypes and simulations** as well as the probabilistic maths to verify their correctness
- **UX**: Making sure that Gamevy's games not only look great but are also easy to understand and a fun to play
- Implementation of **backend** infrastructure in accordance with gambling regulations
- Implementation of **game frontend** for both mobile and desktop via HTML5. Frequent contributor to PIXI.js
- Creation of **infrastructure** for continuous deployment, scaling, monitoring and auditing

### **Last.fm (Oct 2011 - Aug 2013), London**

Web and Data Developer

Back-end and focused (Hadoop, Java and PHP) with occasional front end projects

- **Data research** (Hadoop, Hive, SQL)
- Refactor of a chart-image generator service, serving millions of requests per day
- Maintenance of infrastructure that handles user-uploaded images
- Suggested, prototyped, designed and implemented main parts of Last.fm's **realtime charts infrastructure** that provided up-to-the-second resolution
- Participated in major redesign project

### **IBM (Oct 2008 - Nov 2011), Germany**

Corporate Student Program

Project work in various IBM teams combined with an integrated university BSc program

## **Education**

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### **Baden-Wuerttemberg Cooperative State University Mannheim (Oct 2008 - Nov 2011)**

BSc Science, Business IT