Kristijan Rebernisak

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INTERESTS & SKILLS

I have been reading and writing code, running servers and experimenting with new software since 2004. Most recently, the majority of code I have written has been in Java, JavaScript, and Solidity, but I have experience in many other programming languages and technologies. I am interested in designing and building scalable distributed systems, smart contracts and protocols on distributed networks like Ethereum, as well as native mobile and web clients.

- Full Stack Developer and Tech Lead experienced in system design, API design and data modeling
- Interested in distributed and event-driven systems, product design, and agile methodologies
- Proficient in Java, JavaScript, and Solidity
- Some experience in Kotlin/Swift, Python and familiar with C, C++, C#, MATLAB, Ruby and many others
- Experienced with Object-oriented design, Domain-driven design, Test-driven development, and Functional programming
- Experienced with event-driven architecture (DDD, CQRS, Event Sourcing, Blockchain, RxJava, RxJS, Redux)
- Well experienced in building web, native Android and hybrid mobile applications
- Web technologies (HTML5, CSS3, SVG, DOM, AJAX, REST, SOAP, WSDL, JSON, XML)
- Relational databases and object-relational mapping (SQL, Hibernate, JDO, JPA)
- Non-Relational databases (Blockchain, Firebase, ElasticSearch, Redis)
- General knowledge of cryptography and network security
- Tools: Git/GitFlow, Gradle, Maven, UNIX/Linux, Docker, CI/Jenkins/CircleCI, ELK Stack, Jupyter

WORK EXPERIENCE

RunningBeta a blockchain research company and private investment vehicle

Co-Founder and Technical Lead, Aug 2017 - Present

- Working with Solidity, EVM and Ethereum token standards on smart contract development
- Researching distributed protocol design and system architecture, token economics, mechanism design
- Launched WEINORTH, a tokenization platform built on Ethereum (ICO/KYC/Analytics).
- Working on Kittyland, an internal project, where we test and experiment with different concepts. It is a token publishing and distribution protocol for games and dApps built on top of ERC20, ERC721, and ERC998 token standards.
- Technologies: Bitcoin, Ethereum, Solidity, JavaScript, TypeScript, Truffle, web3.js, IPFS, React, Redux, Reactive Streams (RxJS), Python

Tolar HashNET crypto-currency featuring scalable, fast, secure, and fair transactions

Smart Contract Engineer and Technical Advisor, Mar 2018 - Mar 2019

- Worked on smart contract Ethereum infrastructure, used by Tolar for fundraising and HashNET chain migration.
- Technologies: Ethereum, Solidity, JavaScript, TypeScript, React, Redux, Reactive Streams

Bellabeat an Health-Tracking intelligence platform for women

Mobile Team Lead and System Architect, Sep 2015 – Mar 2017

- Led a team of 10 engineers (Android, iOS, QA)
- Worked on high-level system architecture and technology strategy design
- Worked on native Android mobile app, Bellabeat Leaf, architecture, and implementation
- Implemented core Java shared (Android, Backend, iOS - J2Objc) library architecture

- Led adoption of functional-reactive programming on multiple projects and platforms
- Technologies: Java/Kotlin, Android SDK, Bluetooth LE, Reactive Streams (RxJava, RxSwift), MVI Architecture, SQLite, Firebase, J2Objc, ElasticSearch

ShoutEm mobile app builder

Android Developer, May 2013 - Sep 2015

- Designed and developed a hybrid Android/HTML5 mobile app
- Redesigned an Android native wrapper to run the HTML5 application
- Decreased Android code base by 25% after four weeks of work
- Developed features and architecture for an HTML5 application that was deployed to thousands of users on iOS, Android and across mobile and desktop browsers
- Worked closely with server team designing backend REST API
- Led ShoutEm loyalty module team on architecture and development
- Implemented a local proxy server on Android to enable podcast streaming for US Sprint users
- Assisted in architecture planning and building of an in-house data collecting system
- Technologies: Java, Android SDK/NDK, Reactive Streams (RxJava), Apache Cordova, HTML5/CSS/SVG, JavaScript, Node.js, ElasticSearch, Ruby, Python

FIVE Mobile Design and Development Agency

Android Developer, November 2012 – May 2013

- Developed Android apps for various enterprise clients like Allianz, The Hearst Corporation, Konzum and startups like Fogg Mobile and Visiobike.
- Worked on Bluetooth protocol communication with a hardware controller used by an electric bicycle
- Worked on ad hoc wifi webcam streaming in MJPEG video format
- Technologies: Android SDK/NDK, Maven, Ant, RoboGuice, Otto, kSOAP 2, Bluetooth, SQLite

Real Networks

Java EE Developer, CUEComm, April 2012 - November 2012

- SOAP API backend used by MEP Storefront
- Rewritten from the ground up for better scalability and maintenance
- Worked on extensive testing with SoapUI and JMeter
- Technologies: J2EE, Spring, SOAP, Hibernate, JBoss, Ant, Solr

Java EE Developer, MEP Storefront, February 2011 - April 2012

- Media Entertainment Platform for providing music, ringtones and ringback tones to mobile carrier users
- Designed and implemented features for some major mobile carriers in the US (MetroPCS, Verizon, Sprint) and EU
- Implemented SSO for clients applications using Oracle OpenSSO Fedlet
- Technologies: J2EE, JSP, SOAP, WSDL, JBoss Portal, Tomcat, Maven, SAML 2.0

EDUCATION

MASTER OF SCIENCE IN COMPUTER SCIENCE June 2011

Faculty of electrical engineering and computing, University of Zagreb

Programming Coursework: Advanced Algorithms & Data Structures, Object-Oriented Design, Formal Methods in System Design, Advanced Operating Systems, Machine Learning, Computer Vision, Pattern Recognition, Expert Systems, Neural Networks, Internet Security

Graduation Thesis: Eigenphase Based Recognition System for Partially Occluded Faces

- This approach combines a Principal component analysis (PCA) with Linear discriminant analysis (LDA) using Fourier transform phase information to extract the facial features and reduce the dimensionality of the feature space
- Written in MATLAB and tested on AR Face Database and XM2VTSDB

BACHELOR OF SCIENCE IN COMPUTING July 2009

Faculty of electrical engineering and computing, University of Zagreb

Programming Coursework: Algorithms & Data Structures, Operating Systems, Communication Networks, Information Theory, Programming Language Translation, Artificial Intelligence, Computer Graphics, System Design, Scripting Languages, Java Programming Language

EE Coursework: Embedded Systems, Computer Architecture, Circuits, Digital Logic Design, Signal Processing

BSc Thesis: Hand-written Alphanumerical Character Recognition

- Pattern recognition classification of 30 Croatian letters and numbers from 0 to 9
- Contour features were extracted using Fourier and Granlund descriptors
- K-nearest-neighbor (kNN) classification
- Written in Java

SIDE PROJECTS

KiM (www.kimtoys.com, www.kimtrgovina.hr) - 2009
- Online catalog and content management system (CMS).
- Running on the Google App Engine platform.
- Written in Java on Struts 2 Framework using Struts Tiles, Java Data Objects (JDO), Apache Lucene and other.
- Redeployed as a new website in 2015 using Magento v1.8.1 e-commerce platform, running in Docker containers on Digital Ocean
- Updated to Magento v2.1.9 in 2017, running in Docker containers on Google Compute Engine