Buğra Ekuklu

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software developer specialised in data-driven distributed/parallel systems,
OLAP/OLTP architectures and networking solutions for real-time applications

Preface

I'm a software engineer with six years of experience in distributed systems programming, data architecture design and application development.

I've developed several web services as software solutions as infrastructure of platforms.
I've fluency in developing intuitive (developer-friendly) *REST*, *SOA** services in many languages and frameworks, with platform-native client-side applications, depending on complexity and time constraints of the task.

I highly value testing / documenting the code and sticking close to software engineering principles.

Perso

Persona

Nationality
Turkish

Gender
Male

Military Obligation
Deferred until 2022.

Passport

Passport number
U21005696

Personal identification number
41437591464

Place of birth
Edirne

Issued by
Kadıköy

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Education

Bachelor's Degree

Istanbul Technical University, Faculty of Computer and Informatics, Istanbul, Turkey.

BSc. Computer Engineering *(undergraduate)*

2012 - 2020

Current GPA: 3.02 / 4.00

Courses completed: 48/50

Expected time of graduation: May, 2020

High School

Özel Edirne Fen Lisesi

2000 - 2012

GPA: 96 / 100

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Languages

Turkish
Mother language.

English
Professional proficiency in reading, writing and speaking.
See *Certifications*.

German
Non-professional, speaking only skills.
See *Certifications*.

Modern Greek
Non-professional, speaking only skills.

Language certifications

KET, British Council
92, Pass with Merit.

PET, British Council
93, Pass with Merit.

FCE, British Council
82, Pass.

Goethe Institut — Zertifikat A1
(awaiting certification, expected on February, 2020)

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Skills

Javascript (, ECMAScript 201x)

I've developed web applications and *RESTful* services with *Hapi.js* and *Express.js*, using *PostgreSQL*, *MySQL* (both *MyISAAM* and *InnoDB*), *CouchDB*, *RethinkDB*, *DynamoDB* and *CouchDB* as back-end solutions. I've decent experience with unit testing tools *Mocha*, *Sinon*, *Chai*, *Jasmine* and build automation tools *Grunt* and *Gulp*. I also have experience with front-end frameworks, namely *Angular.js* and *React* (with *Redux*, *Saga*, *Helmet*, *Enzyme* etc.).

Ruby

I've developed web applications with *Rails* and *RESTful* services with *Sinatra*, using *ActiveRecord* with *PostgreSQL* back-end. I've implemented automation of deployment of distributed software using *Chef*.

Elixir/Erlang

I've developed *RESTful* web services with *Phoenix Framework*, which I'm also a contributor of, *Plug* and *Maru* with excessive unit testing using *ExUnit*. One of my architectures, which is currently in production, makes complete use of Elixir stack with *OLAP* counterparts, using *CitusDB* and *Hadoop Framework* with *MapReduce*, *Hive* and *HBase*.

Containerisation, container orchestration

I've set up centralised log management with *ElasticSearch, FluentD, Fluentbit, Kibana* (EFKK), *ElasticSearch, Logstash, Kibana* (ELK) and *Graylog* stacks, and application performance monitoring with *Prometheus, Grafana* stack with sidecar injection support. Built application gateway with *Kong* (using native ingress controller) and *Istio* with authentication/authorisation support provided by *Ambassador*. Written *Helm* charts for containerised applications, deployed multiple stacks with umbrella *Helm* charts.

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C++

I've used *Boost* C++ libraries (*ASIO*, *Meta*, *String.IO*, *JSON/XML* etc.), developed applications with *Poco*, designed real-time socket communication systems with *Protocol Buffers*. I've knowledge of analysis tools such as *Clang Static Analyzer*, *Valgrind*, *GBench*. Have decent experience with C++ build tools, namely *CMake*. Have a toy project, an application framework to build scalable web services in C++, called *Stallion Framework*, which makes highly use of modern C++17 features, *RAII* and its co-idioms.

Haskell

I've developed web application with *Yesod* and *Minima*, as a toy project, performing statistical calculations with activity data and *Delaunay triangulation* of the locations gathered from *Bluetooth®* based *IoT* devices.

Python

I've developed web applications with *Flask* and *Django*, and used *SQLAlchemy* as object-relational mapper.

C

I've developed embedded systems applications with *ESP-8266X*, *nRF5(1-2)xxx*, *TI Stellaris®*, *STM32* and *MSP430* devices. I've done modifications in various *Linux* kernel versions (2.10.~, 3.13.~, 4.~) and *Darwin* kernel versions (14.~, 15.~, 16.~), developed device drivers as both kernel modules and extensions.

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Skills

Java

I've developed real-time network applications with *Netty* framework, used *JUnit* for unit testing and *Hibernate* for object-relational mapping. Developed web services with *Spring Framework* (and *Spring Boot*), have experience with both *Maven* and *Gradle* build toolchains.

Kotlin

I've developed web services using Spring Framework, transited existing web service implementations from Java to Kotlin.

Objective-C, Objective-C++ and Swift

I've decent experience in application development frameworks for Apple devices, namely *Cocoa*, *Cocoa Touch* and *Core Data*, and developed many applications in *macOS*, *iOS*, *tvOS* and *watchOS* platforms, all deployed to respective *App Store*'s.

C#, C++/CX

I've developed front-end applications for a real-time analytics platform.

Csh, Zsh

Regularly, I write shell scripts for various purposes to automate the process in my all computers.

VimL

I've my own Vim scripts (especially about *Elixir* language), which helps writing code and debugging in Vim.

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Experiences (not an exhaustive list)

Saudi Digital Payments Company

ENTERPRISE COMPANY

18.06 — 19.12 (1 yr, 6 mo)

KaiOS Solutions Developer ON-SITE

Istanbul, Turkey (of Riyadh, Kingdom of Saudi Arabia)

19.03 — 19.12 (9 mo)

19.12

We developed first financial / banking application of KaiOS operating system, a mobile operating system for low-cost feature phones, such as Nokia 8110 4G (the banana phone), heavily being used in India, Saudi Arabia and Pakistan. The application was backed by our homemade UI components library built on React framework, with **+120 KLOC** of untested source code.

We've released two applications, one to the merchants of our platform, and the other to the customers of our platform.

∗ *KaiOS* simulator environment to improve development experience
∗ React components library, named *Werkzeug*†
∗ Push updates without needing *KaiOS App Store* just in time
∗ Application for merchants: Merchant's application
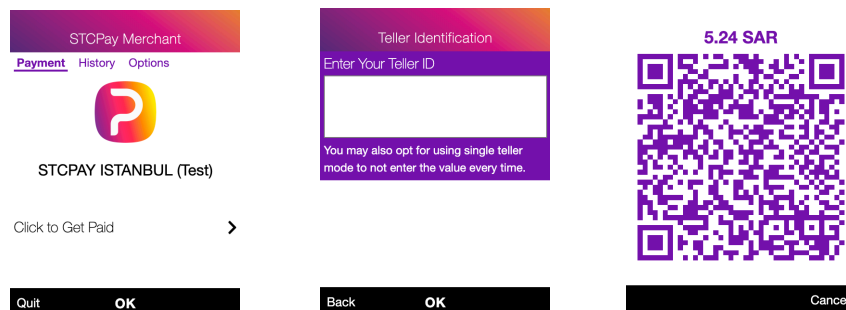∗ Application for customers: Wallet application

KaiOS Solutions Developer (ctnd.)

The two applications developed for the *KaiOS* platform is backed by the *Werkzeug* React components library, developed in-house by myself.

Showcase: STC Pay wallet application for *KaiOS*
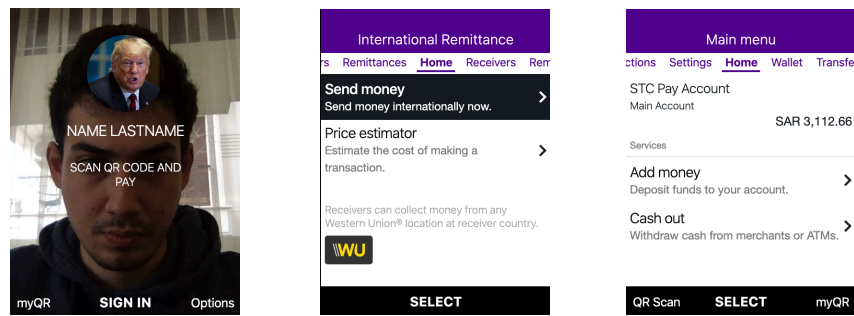
Showcase: STC Pay merchant application for *KaiOS*

Distributed Systems Developer ON-SITE

Istanbul, Turkey (of Riyadh, Kingdom of Saudi Arabia)
18.06 — 19.03 (9 mo)

19.03

We started development of <u>instant messaging (IM) services</u>, named **STC Blink**, by using Matrix† open-source instant messaging software.

* *Matrix*-compatible push gateway in *Kotlin/Java* using *Spring Boot*
* <u>Configuration and identity management portal</u> web application with *React*
* Ramp up for *Kubernetes* integration
* *Helm* charts for *Matrix* components
* <u>Centralised log management</u> based on *ElasticSearch*, *FluentD*, *Fluentbit* and *Kibana*
* <u>Centralised application performance monitoring</u> with *Prometheus* and *Grafana*
* <u>API gateway</u> with *Kong* (dismissed later)
* <u>Edge traffic management</u> with *Traefik*
* <u>Service mesh</u> with *Istio*

Showcase: STC Blink administration portal

Blink Web Interface

Sign in

Username

example

The name you signed up to the platform.

Password

••••••

Your platform password.

Sign in

Legal notice

Upon successful sign in to the Blink Web Interface, your usage will be governed under End User License Agreement and Terms of Conditions, which are linked below. Blink uses cookies to store information in your browser local, who are used for personalize your experience, and analyze our traffic. You consent to those cookies, if you continue to use this website.

Privacy Policy   Terms of Conditions   End User License Agreement

🌐 English

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Expe

BuyBuddy Türk Anonim Şirketi

STARTUP

16.05 — 18.04 (1 yr, 11 mo)

18.04

Software Developer ON-SITE
Istanbul, Turkey
16.05 — 18.04 (1 yr, 11 mo)

As a startup, we designed an *IoT* device revolutionising retail market, making shopping experience of customers *on-the-go* with mobile payment systems. Customers using our applications can find various products in a shop with their smartphones, see availability and buy them online, without any hassle.

On the other hand, with provided software solution to our B2B partners, enterprises can migrate their existing stock / dispatch management systems and data with our widely supported medium, and with powerful analytics engine of our platform they can utilise targeted advertising.

I developed RESTful backend services in *Phoenix Framework* using *Elixir* programming language, and native desktop management applications for macOS and Windows platforms. I was also responsible for developing the embedded application for our patented device, called *Hitag*s.

What's more, as the lead developer, I was responsible for supervising the development of our open-source software development kits and infrastructure of the platform.

I've worked there without any economic expectations, just for building a software stack using bleeding-edge components.

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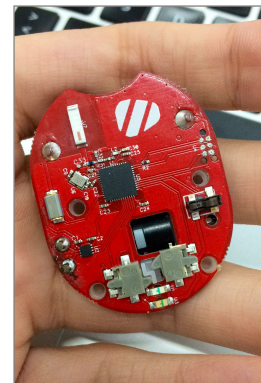
ARM DDT, formerly Allinea Software®

ENTERPRISE COMPANY

15.03 — 17.07 (2 yr, 4 mo)

arm

17.07

Project Maintainer REMOTE
Bratislava, Slovakia
15.07 — 17.07 (2 yr)

Lumetri (a product of *Allinea Software*) is a platform of web analytics and search engine optimisation, providing data for sinks (i.e. *Alexa Inc.*), particularly working with <u>North Europe web sites</u>, having more than **600.000+ HTTP requests per minute** as an inbound data throughput.

15.07

Distributed Systems Developer ON-SITE
Vienna, Austria
15.03 — 15.07 (4 mo)

During my term-based job, we refactored the web services for the platform with *Erlang/OTP* stack, which increased its auto-scaling capabilities and reduced the amount of marginal costs.

Upon ending of my term-based job, I've stayed as a <u>remote</u> full-time developer, handling the maintenance of the new platform.

* Supporting *LDAP* and *Active Directory (AD)* based enterprise-grade authentication systems
* <u>Rewriting data feed handlers</u> from *Websocket* endpoints in *Elixir*
* <u>Providing new APIs</u> supporting *REST* and/or *HATEOAS* principles
* <u>Migrating database</u> from *Oracle®* to *PostgreSQL*
* Migrating *stored procedure oriented architecture* to *code-first architecture*

Designed and written by Buğra Ekuklu.