Erdem Koç

Phone: +90 532 210 62 27

e-mail: kocherdem@yahoo.com

PERSONAL INFORMATION

Birth Date: 02.09.1981
Marital Status: Single
Address: Zümrütevler Mahallesi Nish Adalar Sitesi B 35 D 12, 34852 MALTEPE /ISTANBUL TURKEY
Military Service: Done (12.11.2008-16.05.2009)

SPECIALITIES and PROFESSIONAL INTERESTS

- Telecommunications oriented data analysis and software development
- Embedded programming
- Protocols and algorithms in mobile networks
- Technical project management and consultancy in mobile telecommunications
- Web and mobile app development

EDUCATION

2003-2006: Rheinisch-Westfälische Technische Hochschule Aachen (RWTH Aachen), Germany. MSc. Telecommunications Engineering. CGPA: 1.5 (According to German Education system[1])

Master Thesis Topic: Opportunistic Beam-forming in Multi-user MIMO Systems with an application to 3G mobile networks (UMTS/HSDPA)

1999-2003: Middle East Technical University (METU) Ankara, Turkey. BSc. Electrical & Electronics Engineering. CGPA: 3.81/4.00

1992-1999: Lüleburgaz Anatolian High School

WORK EXPERIENCE

10.2017-present: TURKCELL, Expert Radio Network Optimization Engineer

- Working on a mobile network monitoring, analysis and troubleshooting platform that is connected to Turkcell's network quality monitoring/management databases. Implemented Python packages for "VoLTE Retainability" and "2G/3G CS Call Retainability" modules and working on possible Accessibility & Integrity extensions (ORACLE, Python)

- Taking part in management, maintenance and algorithm development of Turkcell's uSON (unified Self Optimizing Network) modules.

[1] *According to German Education System 1.0 is the highest mark and 5.0 is the lowest mark.*
Grade Evaluation: 1.0-1.5: very good, 1.6-2.5: good, 2.6-3.5: adequate, 3.6-4.0: satisfactory, 4.1-5.0: unsatisfactory.

05.2013-10.2017: TURKCELL, Senior Field Quality Assurance Engineer

- Designed and implemented a reporting platform for OOKLA SpeedTest® data. Platform takes raw inputs, cleans the data, writes it to databases and visualizes the results via reporting templates. (Python, C#, MS SQL, SQL Server Report Builder)
    - This platform provides robust and clean information in Turkcell since 2016 and led to a marketing campaign and several network optimization actions. Platform's motivation and its approach to crowd-sourcing took a lot of attention when it was presented in "TELCO DATA Analytics Conference, Madrid" in 2017.
- Designed and developed a web based geographical reporting and analysis platform "FQA Taxi" to monitor and report network KPIs coming from drive test modules located in randomly traveling commercial taxis (HTML, JavaScript, OLAP)
    - This self-initiated project was given "2014 TURKCELL CXO AWARD"
- Designed and developed
    - a database management, geographical data analysis and automatic reporting tool (fqaery) for efficient analysis and reporting of network quality data
    - a customized GPS coordinate-to-grid algorithm which is %90 faster than traditional GIS tools like Mapinfo®
    - .NET library to convert Turkish Lambert Conformal coordinates into spherical coordinates directly from Lambert Conformal Conic Projection formulae
    - a multithread fast grid algorithm to convert raw Ookla® SpeedTest coordinates into variable size grids
- Planning and management of country-wide Turkcell 3G MTU drive-test benchmarking project reporting part of which was done fully scripted via the fqaery tool mentioned above

07.2010-05.2013: PLANO Engineering, Istanbul. R&D Project Manager
Principle investigator and technical project manager of "geo-location based 3G network optimization services" of PLANO (an R&D project funded by TUBITAK- The Scientific And Technological Research Council Of Turkey). Also responsible from technical contribution and management of RF optimization software projects for 3G mobile networks with 7 reporting personnel

05.2009-07.2010: Çukurova Holding Bilgi İşlem Hizmletleri AŞ, ISTANBUL. R&D Project Manager.
Project management during whole production cycle of Turkish National ID (smart) card and Azerbaijan Military ID card prototypes. Took part in smart card engineering team of the company and was responsible from production of SIM and USIM cards for various GSM operators like Turkcell, KCell, AzerCell and Eagle Mobile. Wrote the XML - Machine interface for Smart Card production in Java. This interface is being used in production of Turkish Telecom fixed line memory cards. Also developed the HOBIM Data Generator Randomness Test Suite, according to "GSMA SAS (Security Accreditation Scheme) Certificate" specifications in Java

11.2006-07.2008: Ericsson GmbH, BMTP Prototype Unit, Nuremberg, Germany. **Embedded Software Developer and Tester.**
Took part in PHY Layer team during Ericsson U365 (HSUPA for Ericsson Mobile Platforms) project. Designed, modelled, implemented and tested embedded software (UMTS PHY Layer) and took part in software maintenance for Ericsson WCDMA Mobile Platforms. Designed and implemented HSUPA E-HICH/E-RGCH control channels handler used in 3G Ericsson mobile phones

04.2006-10.2006: Institute of Integrated Signal Processing Systems (ISS) RWTH Aachen University, Aachen, Germany.
Worked on a master thesis about Opportunistic Beam Forming for MIMO Systems and its possible application to increase throughput in 3G networks and beyond (HSDPA or 3.5G). (This was an extension of a previous joint project between Siemens and ISS which was finished for MISO case and submitted to Siemens)

09.2005-02.2006: Alcatel-Lucent Deutschland AG, Bell Labs, Stuttgart, Germany.
Worked as a fulltime student worker on performance evaluation and testing of 3G prototype of Alcatel. Main task was physical layer measurements and maintenance of laboratory 3G prototype

03.2005-08.2005: Texas Instruments GmbH, Munich, Germany.
Worked as a full-time intern at the broadband communications group (BCG) of Texas Instruments on TI's ADSL modems and central offices. Main task was C and assembler based embedded software programming for ADSL. Developed C & C++ software to upgrade TI's real time data capture tool from ADSL to ADSL2+

03.2004-02.2005: Institute of Communication Systems and Data Processing, RWTH Aachen, Germany
Worked as a part time student worker (HIWI) on a research project about "Phoneme based low bit speech coding". Main task was implementation of a text based, speaker independent speech compression algorithm

TECHNICAL SKILLS

Language:

- English (Speaking: Fluent, Reading: Advanced, Writing: Advanced)
- German (Speaking: Fluent, Reading: Advanced, Writing: Intermediate)

Software Development Languages & Tools:

- Python, C#, C++, C, Java, Javascript, SQL, HTML, MATLAB

Telecommunications Protocols:

- LTE & UMTS Radio Interface Protocols. (Accessibility, Mobility, Retainability KPIs and algorithms)
- LTE & UMTS optimization and troubleshooting

Mobile Network Planning and Optimization Tools:

- ASCOM TEMS Automatic , TEOCO Mentor 3G, SwissQual NQDI, ATOLL, Actix, MOSHELL, Ericsson GPEH, Huawei PCHR (decoding & analysis)

HONOURS & AWARDS

2014: Turkcell CXO Award
This award was given by Turkcell after designing and implementing an online field quality monitoring platform onto ASCOM's Tems Automatic solution. (for details please refer to work experience)

2004: "Texas Instruments Prize of 2004 for the Best DSP Programmer Lab Project." at Institute for Integrated Signal Processing Systems (ISS), RWTH-Aachen
This award was given by Texas Instruments after designing the most efficient digital receiver software and implementing it using Code Composer Studio (C based DSP software development environment)

09.2003-02.2006: Held **TEV (Turkish Education Foundation) & DAAD (German Academic Exchange Service) Scholarship** during the graduate education at RWTH-Aachen, Germany

2000-2001: Three times **"Kerim Altay Award" Winner**
This award is given to students who have a GPA of 4.00/4.00 for that semester at METU Department of EEE.

1999-2003: 7 High Honor Student Degrees at METU

PANELS and CONFERENCES

24.10.2017: Speaker at TELCO Data Analytics and AI Europe, Madrid
Presentation Topic: Mining Crowd-Sourced Smartphone Data for Network Quality Analysis

29.05.2012: Speaker at 6th Annual Mobile Network Optimization Summit, Dubai
Presentation Topic: Geo-location Based Optimization and its Potentials

08.05.2012: Speaker at IQPC Mobile Networking Optimization Conference, Johannesburg
Presentation Topic: Geo-location Based Optimization and its Potentials for QoE

03.11.2011: Panel Speaker at "14th Annual Mobile Optimization Conference" Amsterdam
Panel Topic: Improving Optimization Techniques and Introducing New Technologies to Increase Network Efficiency and Meet the Challenge of Next Generation Mobile Broadband Services

VOLUNTEER EXPERIENCE

05.2015 – Present: Volunteer member of TSAG (Turkcell Social Activity Group) Planning and organization of several hobby work-shops, social trips and events for Turkcell employees.

03.2011 – 06.2011: External Lecturer of "Modern Communication Technologies" at Istanbul University Communication Faculty, Radio TV Cinema Department for one complete semester

HOBBIES and INTERESTS

Sports Journalism: Prepared German "Bundesliga" football league reports for the weekly football magazine "Taktik" of the Turkish national newspaper "Milliyet" from 2006/07 to 2013/14 seasons. Recent articles can be found at: http://www.milliyet.com.tr/erdem-koc/tumyazilar/skorer/

Drawing and Painting: Some of my current work can be seen at https://www.instagram.com/winterdem/

REFERENCE:

Micke Eriksson, BI Nordic Founding Partner
micke@binordic.com, +46(0)70 264 8165
Storgatan 53, 931 30 Skellefteå, Sweden