Rohat Gunes

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Work Experience

Software Developer June 2021 – Present
Ericsson *Lund, Sweden*

- **Time-complexity analysis** and cost predictions using ML models, **overhaul of entire ML pipeline**.
- Software systemization, design and implementation on control interfaces and components of L1.
- Fixed point implementations of Ericsson proprietary L1 algorithms in PUSCH, SRS.
- **Python, C and C++ 17** development in **Linux** environment for various baseband related tasks.
- Multicore DSP Programming within **Ericsson Many Core Architecture**.
- Sub-system level design and software implementation of internal tools, improving baseband observability.

Software Developer May 2019 – May 2021
Ulak Comm. *Istanbul, Turkey*

- Software design and implementation using **C++14** to achieve an optimized L2RRM (scheduler) algorithm.
- Implemented **multicore DSP programming** modules on Texas Instruments c66x chipsets.
- MATLAB simulations for timing offset over the air estimations in NB-IoT scenarios, under EPA 5Hz propagation model.
- Floating point simulations of physical channel estimation and equalization processes in **PUSCH**.
- Bit exactness verification between floating and fixed point implementations.
- Time critical software implementation in PUSCH to deploy **UL CoMP** technology by leveraging **LLR Combining**. Benchmarking in customer network and lab, debugging, optimization.
- Software implementation of **C/U-Plane** in **RLC/PDCP** layers for **NB-IoT**.
- Implementation of Packet Delay Meas. Metrics for L2 as specified in **3GPP TS 36.314**.

Part-time Software Developer Dec 2017 – May 2018
Vestel *Manisa, Turkey*

- Improving security protocols and algorithms used for wireless communications in smarthome devices.

Education

BSc in Electrical and Electronics Eng. 2014 – 2018
Ege University *Izmir, Turkey*

- Telecommunications Elective Courses - 240 ECTS in total - GPA 3.29/4.00
- **Graduation Project: USB Powered Ultra Wideband Superheterodyne Receiver Design**

  Implemented a receiver system in 1-4.2 GHz band. Achieving a minimum gain of 13 dB and noise figure below 3 dB. Produced RF components were measured with commercial network analyzers. Software interface was built within LabView.

Achievements and Scholarships

Coursera Certificate: Object-Oriented Data Structures in C++
Scholarship: Granted by the Ministry of Youth and Sports upon achieving high rankings in national university entrance exams.

Languages

Turkish: Native
English: Fluent, *TOEFL IBT 100/120 (July 2019)*
Swedish: Elementary, *completed SFI D-Course (Juni 2022)*

Personal Interests

Skills: C/C++, Python, Bazel, Make, signal processing, system design, public speech, ...

Interests: Snowboarding (inactive), board games, hiking, training,

Music: post metal/rock, Godspeed you! Black emperor, Year of No Light