

# CANER DERİCİ

## Computer Science PhD Candidate

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Extended version (CV): cderici.github.io/cv.html

## SELECTED PROJECTS

### Pycket: A tracing JIT compiler for self-hosting Racket<sup>1</sup>

- I am the main developer and maintainer. Made Racket bootstrap itself on it, i.e., achieved a full Racket implementation. Developed the run-time primitives and data structures (hash tables, structs etc.) on RPython framework.

### Rax: A full-stack nanopass compiler from a small subset of Racket to x86\_64 assembly<sup>2</sup>

- Started for fun, turned into a school project. Two person collaboration. I built and tested all the passes (e.g., closure conversion, register allocation, code-gen, etc.).

### Hazırcevap (Witty): A closed domain question answering system for high school students

- I led the research and development, 3 faculty members and 4 grad students were involved. This was my MSc thesis work, so I worked on pretty much everything about it. (see Publications)

### FARS: Functional Automated Reasoning System<sup>3</sup>

- A resolution-refutation style automated theorem prover. I developed it for fun at first, then I turned it into a school project. Written all in Racket by myself.

### Sessizliğe Oku (Read to Silence): An application to teach people with hearing disability how to read

- I was the main developer. 2 faculty members from Linguistics, 1 from CS, and 2 RAs were involved. We aimed to develop a stable framework, so Turkish grammar lectures and exercises could be easily accessible for Deaf people. Collaborated with the linguists to implement a web & mobile app specifically designed for Deaf people.

## PUBLICATIONS

- Flatt M., Derici C. Dybvig R. K., Keep A. et. al. "Rebuilding racket on chez scheme (experience report)", ICFP'19
- Derici C. et. al. "A closed-domain question answering framework using reliable resources to assist students" Natural Language Engineering'18
- Derici C. et. al. "Question analysis for a closed domain question answering system", CICLING'15
- Derici C. et. al. "Rule-based focus extraction in Turkish question answering systems", SIU'14
- Başar R. E., Derici C., and Şenol Ç. "World With Web: A compiler from world applications to JavaScript". Technical Report, Scheme and Functional Programming Workshop'09

## SPOKEN LANGUAGES

Turkish (native)



English (lived in US since 2015)



## EDUCATION

- PhD (Grad. 2020), CS, Indiana University, USA
- PhD CS, Boğaziçi University, Turkey (Dropped)
- MSc CS, Boğaziçi University, Turkey
- BSc CS, Istanbul Bilgi University, Turkey

## EXPERIENCE

- Teaching & Research Assistant, Indiana University, 2015 – 2019. Taught Introduction to Programming, Domain Specific Language Design.
- Product Development Specialist, Asseco SEE, 2013. Used Java, Tomcat, Spring, Jira.
- Teaching Assistant, Istanbul Bilgi University, 2010 – 2013. Taught Programming Language Principles, Data Structures & Algorithms, Database Systems.
- Hackathonist'14, Istanbul, 2014. Developed a Google Glass application (running on a mock glass API) that talks with the CitySDK for various smart city tasks (e.g., finding a suitable bus-route).

## AWARDS & SCHOLARSHIPS

- Full Scholarship for BSc, 2005-2010
- Research Scholarship for MSc (fully funded for 2 years)
- Scholarship for a research project on teaching natural languages to hearing impaired, 2014.

## SKILLS

Racket	●●●●●
Python	●●●●●
JavaScript	●●●●●
Java	●●●●●
C/C++	●●●●●
Go, Rust, Haskell	●●●●●
SQL, Matlab, R, CSS	●●●●●

Linux	●●●●●
Git/Version Control	●●●●●
LaTeX	●●●●●
Emacs	●●●●●

Electric Guitar	●●●●●
Fantasy Role Playing	●●●●●
Tango	●●●●●
StarCraft II	●●●●●

<sup>1</sup><http://www.github.com/pycket/pycket>

<sup>2</sup><https://github.com/cderici/rax>

<sup>3</sup><https://github.com/cderici/FARS>