

CANER DERICI

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 Racket¹

- 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 assembly²

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

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

- I lead 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 System³

- 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.

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

- I was the main developer. 2 faculties from Linguistics, 1 from CS, and 2 RAs were involved. It aimed to develop a stable framework on which the Turkish grammar lectures and exercises for deaf people can easily be provided. Collaborated with the linguists to implement the web & mobile app that's designed specifically for deaf people.

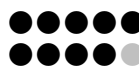
PUBLICATIONS

- 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'2018
- Derici C. et. al. "Question analysisfor a closed domain question answering system", CICLING'15
- Derici C. et. al. "Rule-basedfocus 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, BoĖaziĖi University, Turkey (Dropped)
- MSc CS, BoĖaziĖi University, Turkey
- BSc CS, Istanbul Bilgi University, Turkey

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	●●●●●

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.
- Best Band Performance & Second Best Composition at The Musical Contest among high schools, 2004

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).

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

²<https://github.com/cderici/rax>

³<https://github.com/cderici/FARS>