

# ONUR ŞAHİN

Software Engineer

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## EDUCATION

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### **Bilkent University, Turkey**

June 2021

B.S. in Computer Science

Full Scholarship

Overall GPA: 3.49/4.00

### **Bilim ve Sanat Merkez, Turkey**

2006-2016

Bilim ve Sanat Merkezi is a special foundation by the Turkey government which focuses on education of gifted children. In early years students start with general concepts like scientific learning then they assigned to more specialized areas like physics or math.

## EXPERIENCE

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### **Carbon Health**

February 2021 - Present

*Full Stack Developer*

*Remote*

- Mostly backend using Scala & Kotlin
- Writing/Maintaining new microservices
  - Using technologies including PostgreSQL, gRPC, SQS/SNS, Elastic Search and many others.
  - Optimized a long running database read job from 25 hours to 40 minutes with better use of database indexes and optimizing queries to reduce time complexity.
  - Designed and integrated an async workflow into the current system. Instrumented logging and observability tools to monitor problems easily.
  - Designed and implemented a microservice.
- Also working on React Native projects when needed.

### **Research and Internship at iVis**

June 2020 - December 2020

- Incremental Packing Research
  - Packing of disconnected graphs is an important topic in various areas. There are very efficient algorithms in terms of fullness but these algorithms ignore the initial layout of the graphs. We are trying to come up with a feasible packing algorithm that works incrementally so that user preserves their mental map
- Cytoscape Layout Utilities
  - Formerly, the packing algorithm of this extension was centering to the a fixed point
  - Added the ability to preserve to the current center of components
  - Fixed some bugs that would lead the algorithm to crash
  - For my contributions you can check PR #19

## PROJECTS

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### **(Conference Paper) Augmenting Code Review Experience Through Visualization**

September

2020-July 2021

- <https://ieeexplore.ieee.org/abstract/document/9604852>
- Implemented a prototype tool that visualizes code difference between two versions of a Java project.
- Tool is based on OOP concepts like packages, classes and fields and extensible to other classes. And extensible to other OOP languages.
- Paper is presented on VISSOFT 2021 conference.

### **Contribution to the Jakt programming language**

- Contributed to the typechecker and parser of the language.
- List of PRs that I opened.

### **Flux programming language (Personal Project)**

- Fully featured scripting language implementation.
- Bytecode interpreted.
- Completely written from scratch without using external libraries for parsing, compiling, etc.
- Implemented using Rust.

## TECHNICAL STRENGTHS

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<b>Areas</b>	Parsers, Lexers, CRUD applications, Event driven programming
<b>Computer Languages</b>	Scala, Rust, Java, Kotlin, OCaml
<b>Protocols &amp; APIs</b>	REST, gRPC
<b>Databases</b>	PostgreSQL

## OTHER

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Placed 156th among 1.5 million student in Turkey University Entrance Exam (Ygs).

The textbooks that I read:

- Modern Compiler Construction in ML (Currently Reading)
- Programming – Principles and Practice Using C++ - Bjarne Stroustrup
- The Rust Programming Language - Steve Klabnik and Carol Nichols

I play electro guitar for two years now. I like to cover my favorite songs and write my own instrumental pieces.