

BORIS KARAVASILEV

I am a first year MSc student of Computer Science at the IT University of Copenhagen. During my bachelor's degree in Computer Science at the [Brno University of Technology](#) I studied and worked abroad in both Denmark and Wales. Through personal projects, a student job and my bachelor's thesis I gathered experience with the Unity Editor.

KEY COMPETENCES:

- C#, Unity Editor
- Git
- Communication
- Scrum
- Game Design

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EDUCATION

IT UNIVERSITY OF COPENHAGEN

Duration: 2021 – 2023
Form: Master (MSc.), Full-time
Field of Study: Computer Science
Country: Denmark
Website: itu.dk



BRNO UNIVERSITY OF TECHNOLOGY - FACULTY OF INFORMATION TECHNOLOGY

Duration: 2017 – 2021
Form: Bachelor (Bc.), Full-time
Field of Study: Information Technology
Country: Czech Republic
Website: fit.vut.cz



BANGOR UNIVERSITY

Duration: January 2020 – May 2020
Form: Erasmus+ exchange student
Field of Study: Information Technology
Country: United Kingdom, Wales
Website: bangor.ac.uk



UNIVERSITY OF SOUTHERN DENMARK

Duration: September 2019 – January 2020
Form: Erasmus+ exchange student
Field of Study: Information Technology
Country: Denmark
Website: sdu.dk



PROFESSIONAL EXPERIENCE

LOYALTY LOGISTIX LTD. - REACT NATIVE DEVELOPER

2/2020 - 7/2020 | 6 months

During my semester in UK (Wales) as an exchange student, I found a part-time job at a local small-medium sized IT company. Their clients were mainly automotive companies like Jaguar, Hyundai etc. I was working mainly on an app for Hyundai South Africa. When I came in, I was given a task to implement a new design of the app together with one of my colleagues. I appreciated the support and guidance of my senior colleagues since I only had experience with creating web apps with React and I learned the peculiarities of React Native on the go. My colleagues were always there for me, whenever I needed to ask a question about older code or get a code review.

UNICONTROL - UNITY C# DEVELOPER

9/2019 - 12/2019 | 4 months

When I went to study for a semester abroad to Denmark, I worked part-time for a Danish startup based in Odense. There I used Unity to extend the UI and the functionality of a tablet application. This application was the heart of a precise control system for compact excavators under 15 tons. I learned a lot about making small incremental changes, doing code reviews, and collaborating in a small team. I also got a lot of insights on how startups are managed and scaled.

FREELANCING - WEB DEVELOPER

6/2018 - 12/2018 | 6 months

After attending a course about entrepreneurship, I tried validating and starting different types of products and services. Most of them failed and were rejected by the market. Meanwhile I did several websites for small businesses and freelancers. Because it was difficult to balance many activities and university, I had to stop freelancing when the exam period started. I learned a lot because of this journey into the world of business.

ELEDUS S.R.O. - JUNIOR C# DEVELOPER

4/2015 - 9/2016 | 1 year 6 months

This was my first part-time job that I did simultaneously with high school. In the beginning I worked mainly on smaller UI oriented tasks in Visual Studio WPF project. Later I started doing also more of the control logic and came in touch with MVVM architecture. In this job I was also introduced to the GIT version control system for the first time. The desktop application that we were working on was a control panel for industrial x-ray machine for visual control of electronic circuits.

MY PROJECTS



Live previews and videos are available on my website www.karavasilev.com

BACHELOR'S THESIS

PROCEDURAL WORLD GENERATOR - UNITY

Within this thesis I designed a procedural terrain generator and a water surface shader. I used these components to implement a generator of infinite worlds composed of islands in the sea. Traditional methods to world partitioning and object placement were modified to best suite this purpose. Additionally, an approach for generating terrain of islands with diverse shapes by pseudo-randomly generating points defining the terrain's properties was devised. The implemented island generator can run in real-time even without parallelization thanks to the custom developed task system, dynamically spreading the computational load over multiple frames.

POCKET WIZARDS

MOBILE GAME - UNITY

After creating multiple simple and unfinished games in the Unity game engine, I decided to create a game from start to finish and publish it on the Google Play store. It all started by brainstorming game ideas. Next step was to build a quick prototype and test if the basic game mechanics were fun. Next, I added more features and tried to make it look and feel good. I did everything ranging from programming, 3D modeling in blender, rigging, animating, level design and creating all the graphics for Google Play. I did all of this in a restricted time interval of about 3 weeks after my exams and before the next semester started. After being closed in my room and working many hours I finally published it! Unfortunately, it got only around 500 downloads because I did not have time to continue working on the game neither to do marketing for it.

ROLEBOOK

MOBILE GAME - UNITY

This was the first game that I published on the Google Play store. Even though it never made it past alpha release and missed a full story, I learned a lot about Unity and its UI system by programming this application. It consisted out of two parts. First, was the actual app for reading interactive stories where player's choices changed the story that he was reading. Second, was the tool for writing these interactive stories. Both were good enough to write a demo story in them, but I never teamed up with a writer to get a real story and test in on more people.

JARVIS

VOICE ASSISTANT AND HARDWARE MODULE – C#, ARDUINO

Using Visual Studio and C#, I developed a voice-controlled assistant with a USB hardware module powered by Arduino and hacked radio-controlled outlets to enable voice control of home appliances. Voice recognition and synthesis was processed by interfacing built in libraries into the Windows OS. I focused on creating easy to use user interface for adding, customizing and removing voice commands. It was possible to assign an action to every voice command. Actions were able to either run a program on the computer, open a specific website or turn on/off an outlet in my room.

ROBOTIC ARM

MECHATRONICS PROJECT – ARDUINO, PICAXE

This was one of my first bigger projects. I crafted the mechanical part in our garage and programmed the “Arduino” and “PICAXE” microcontrollers in “C++” and “BASIC” programming languages. My dad helped me with designing and creating of the printed circuit board responsible for powering and controlling of the motors in the robotic arm.

GUIDEX

WEB RESERVATION SYSTEM - REACT

In a couple of weeks, I went through a React.js course and was able to build a prototype web platform that allowed users to sign up, login and book tickets for events. There was no time left to build a custom back end for it so I learned how to connect it to Google Firebase that provided all the authentication and a real-time database services. This was meant to be a platform for connecting local guides or event organizers with people that want to experience something interesting. Guides would get paid when tickets would get purchased through our platform and we would get a commission. We organized about 10 test events and then canceled the project because we lacked time and I didn't feel that this was the right project for me.

MAXIM DUŽEK – PERSONAL WEBSITE

WEBSITE FOR MY CLIENT – HTML, CSS, BOOTSTRAP

This website is fully custom designed and coded. To make it look truly professional, I hired a designer to turn the wireframes that I designed and agreed on with my client into a final design. Afterwards, I also tried outsourcing the coding but ended up finishing it on my own anyway. On this project I practiced wide range of skills from negotiation, management, coding and finally presenting the final product to my client.

ACHIEVEMENTS

- 1st Place - [Improvisation speeches](#) (Toastmasters national round) 2018
- 1st Place - ["Robotiáda"](#), competition of line following robots 2016
- 1st Place - [Students` Professional Activities \(SPA\), city round 2016](#)
- 2nd Place - Students` Professional Activities (SPA), regional round 2016
- 1st Place - [Students` Professional Activities \(SPA\), city round 2017](#)
- 2nd Place - [Self-made microcontroller devices competition at BUT FEEC 2016](#)
- 2nd Place - Language competiton "A SCHOOL ENGLISH CUP", category "PET" 2013
- 2nd Place - Merkur perFEKT Challenge (Robotics team RDT) 2016
- 3rd Place - Language competiton "A SCHOOL ENGLISH CUP", category "KET" 2012
- 3rd Place - Electronics competition for primary school pupils 2012