

# Alexandru-Ilie Știrbu

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## Education

### University "Alexandru Ioan Cuza"

Iasi, Romania

BACHELOR DEGREE IN COMPUTER SCIENCE

July 2021

- Faculty of Computer Science, Iasi, Romania — Started in Fall 2018

## Projects

### !FI! Bolnav (Summer 2020)

- The main application is a website that is meant to offer guidance regarding medical attention. I worked on a **submodule** that splits a given image into patches of 50x50, feeding it to a **Neural Network** dedicated for detecting whether the breast cancer is benign or malignant or to a **Neural Network** dedicated to detecting brain tumors, written in **Python**. This submodule hosts a **server**, offering access for an **API** for the neural networks. The submodule is inside a **docker image** to solve the compatibility problems for debugging / hosting.

### Universal Storage Tool (Summer 2020)

- A **website** that allows any user to sign up/sign in, and link their existent **accounts** of **DropBox**, **Google Drive** and **Microsoft OneDrive** in this platform, allowing to **upload/download files** through the **web application**, according to what settings the user has. The application is modeled on the **Model-View-Controller** paradigm, having the **back end** written in **NodeJS**, and the **front end** in **HTML**, **CSS** and **JavaScript**, using **MongoDB** for **databases**, and the **Google Drive / Microsoft OneDrive / DropBox APIs** for any required operations. The application also offers an **API** for normal users in order to use its services, and an **API** that requires credentials of the **admin accounts**, to easily have control over the application's data and states.

### Mailing System (Winter 2019)

- A networking project written from scratch that implements a **Mailing System**. The **server** side is written in **C/C++**, while the client side has a **visual interface** made in **QT** with all the functionalities written in **C/C++**, that allows the user to sign up/sign in, create new mails, send them to multiple subjects, CC and BCC, forward them, visualize them, and check for new mails. The project comes with a **hand-made architecture for a database** for mails, each mail having an id, a subject, destinations, an owner, plain-text, HTML-text, emojis, attached files, and a category.

### Romanian Pseudo-code Interpreter (Winter 2019)

- An **interpreter** written in **YACC**, **LEX** and **C/C++**, that analyzes **syntactically** and **semantically** the given code. The **interpreter** will signal any syntactical error, specifying the line and what was expected instead. The syntax allows: basic input-output (read, print), basic control structures (if, for, while, repeat until), strong type variable declarations (int, float, bool, string) with scope declaration, basic operations, arrays, functions with parameters, classes and objects. The semantics allows evaluation of expressions, receiving input from keyboard, printing expressions and mapping of all the variables with values.

## Skills

**Languages** C/C++, Python, Java, C Sharp, SQLPlus, AutoIt, JavaScript, NodeJS, Assembly

**Knowledge** Data Structures, Object Oriented Programming, Algorithms, Graph Theory, Genetic Algorithms, Artificial Intelligence, Game Tactics, Compilers, Computer Networking, Computer Graphics, Databases, Computer Architecture, Math, Probabilities

## Honours and Awards

### Cloudflight Coding Contest

October 2020

2ND PLACE IN IAȘI, 42ND GLOBALLY

### HashCode - International Google's Coding Competitions

February 2020

1ST PLACE IN IAȘI, 13TH IN ROMANIA, 265TH GLOBALLY

### MO-Ariel - International Mathematical Olympiad Championship (Team competition)

December 2019

1ST PLACE GLOBALLY, GOLD AWARD

### MO-Ariel - International Mathematical Olympiad Blitz (Team competition)

November 2019

1ST PLACE GLOBALLY, GOLD AWARD