Maxim Mints

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OBJECTIVE

I am looking for an internship in the Summer of 2018 where I could design and develop low-level computer system software.

EDUCATION

Georgia Institute of Technology **Atlanta, GA**

- **Bachelor of Science in Computer Science** (Threads: Systems & Architecture / Information Internetworks)
- **Started**: *Aug 2015*; **Expected Graduation**: *May 2019*
- **Relevant Courses Taken:** Systems and Networks, Design & Analysis of Algorithms, Digital Circuit Design, Computer Organization & Programming, Intro to Software Engineering, Data Structures and Algorithms, Discrete Mathematics
- **GPA:** 4.0

WORK EXPERIENCE

Hughes Network Systems (hughes.com) **Germantown, MD**
Job title: Software Engineering Intern **Period:** *May 2017 – Aug 2017*

- Assisted with the development of a breakthrough algorithm for classifying network flows using throughput-based metrics
  - Wrote an efficient tool in C++ that converted each flow in several packet capture files into a throughput time series
  - Fully implemented the network flow classification algorithm in Python, and tested it on throughput time series from videos of different resolutions, reaching 73.3% classification accuracy
- Created a complex tool to detect potential sources of interference in the signals received by satellite dish terminals
  - Used Python to efficiently automate multi-threaded collection of signal-to-noise values from over 52000 terminals
  - Developed an algorithm for approximating potential locations of interference sources and implemented it with Java, saving results to MongoDB and providing a RESTful API from a Java-powered webserver for accessing the data

Georgia Institute of Technology (gatech.edu**)** **Atlanta, GA**
Job title: Undergraduate Research Assistant **Period:** *Aug 2017 – Ongoing*

- Working on a proof-of-concept re-implementation of an algorithm for verifying equivalence of two JVM bytecode programs
- The algorithm, created by Professor William R. Harris and his Trustable Programming Group, uses relational invariants between program states to prove or disprove partial equivalence (gt-pequod.github.io)

Alex's Studio (alexsstudio.com**)** **Moscow, Russia**
Job title: Windows Phone App Developer **Period:** *Jan 2015 – Sep 2015*

- Worked on a Windows Phone 8/Silverlight game based on players recognizing CAPTCHA;
- Designed/implemented multiple image distortion tools (such as a mesh-based envelope/wave distorter) from the ground up
- Improved the trade-off between distortion speed and resulting image quality, reaching a close to 50% performance increase

SKILLS

- **Programming Languages**: C, C#, Java, C++, Python, Assembly (FASM)
- **Frameworks/API/libraries**: WinAPI**,** .NET, WinForms, WPF, Silverlight, JavaFX, MongoDB, Android
- **Hardware**: VHDL, Verilog, Altera DE2 Board, Altera DE0-CV Board, Altera Cyclone V FPGA, Arduino
- **Spoken Languages**: Russian – native, English – fluent

PERSONAL PROJECTS

µZe *(May 2015 - Ongoing)*

- An in-development, simplistic, purely-functional, reflective and object-oriented programming language
- Enables modifying a program's source code at runtime through "lazy parsing", allowing to create custom "syntactic sugar"

CControlFlow *(Feb 2015 - Ongoing)* github.com/Mints97/CControlFlow

- A C# library that helps find errors in code by generating control-flow graphs of programs written in C (C89)

tinyObject *(Mar 2014 – Dec 2014)* github.com/Mints97/tinyObject

- A C framework which enables writing object-oriented code with true inheritance in lieu of the regular composition approach

tinyGUI *(Apr 2014 - Ongoing)* github.com/Mints97/tinyGUI

- An object-oriented (via **tinyObject**) C Windows GUI library which provides direct access to low-level WinAPI functionality

ACTIVITIES

HyTech Racing hybrid racecar design club (programming sub-team):

- Designed a simple service-oriented C++ framework for programming the racecar, splitting the entire code into simple "services" to be worked on by one or two people, and establishing a standard of communication between them
- The service-oriented framework helped reach an efficient workload distribution for the programming sub-team