

ABDELSALAM ELTAMAWY

 solomspd@aucgypt.edu
 github.com/solomspd
 /in/abdelsalam-et

 solom.dev
 (+20)1003435365
 Nasr City, Cairo, Egypt

ABOUT ME

Self Introduction Video

As a highly motivated computer engineer, I am confident in my skills in software engineering and academic research proving valuable to any team. Seeking to Create tailored solutions to novel problems.

EDUCATION

The American University in Cairo (AUC)  2017-2022

 Cairo

- > BSc in Computer Engineering
- > Graduated with High Honors. GPA: 3.6/4.0

International School for Elite Education  2011-2017

 Cairo

- > Graduated with High Honors

SELECTED PROJECTS

Machine learning based decompiler   2021-2022

   

- > Transformer based decompiler targeting android.
- > Novel tree graph generator for AST representation.
- > Designed to be a forensic malware tool.

Persistence of vision display   2021

     

- > Created high speed fan display and embedded system to fulfill millisecond timing constraints.
- > Featured embedded web server for user accessibility.

Machine learning library from scratch   2021

   

- > CUDA accelerated ML library.
- > Implemented training and inference framework for deep neural networks and convolutional neural networks.

Distance sensor from scratch   2021

  

- > Ultrasonic distance sensor.
- > Reverse engineered market boards to create a more accurate sensor.

RISC-V microarchitecture   2021

  

- > Implemented 6 pipeline RISC-V microarchitecture on an FPGA in Verilog fulfilling specification requirements.

Pacman clone   2018

  

- > Recreated first 3 levels of Pacman.
- > Complete with level editor and online user scoreboard.

EXPERIENCE

Graduate teaching assistant  2022-present

 AUC

- > Taught CUDA and parallel programming concepts to students in GPU computing course.
- > Orchestrated deployment of standardized docker environment for students.

Undergraduate teaching assistant

 AUC

- > Assembly&Comp Organization  2021-2022
- > Computer Architecture  2020-2021
- > Department Tutor  2019-2020
- > Programming Fundamentals  2018-2020

Lead research assistant  2020-2021

 AUC

- > Led team of 4 to create a process that builds application specific RISC-V based CPUs.

AI development intern  2020-2021

 Tod-Z (remote)

- > Led AI and machine learning development.
- > Built entire machine learning stack from concept to training to deployment on AWS.

Intern  2020

 Agile technologies (remote)

- > Built web store using OutSystems.
- > Regularly communicated for quality assurance.

EXTRACURRICULAR

ROV media head  2017-2019

 AUC

- > Led team of 5 to market and document Robotics club's remotely operated vehicle events.
- > Photographed and documented dozens of events and directed 4 marketing videos.

Assistant media head  2017

 AUC insider

- > Lead photographer for AUC news paper.
- > Published over a dozen photographs covering local events.

PUBLICATIONS

A Neural Generation Framework for Android Decompilation (Abdelsalam, et al.) 2022

 (pending publication)

- > Completed Bachelor thesis
- > Created a novel method for tree graph generation.
- > Applied the novel method and transformer translation to Android decompilation.

Dive, Eat, Sleep & Repeat 2022

 Busniess Monthly Magazine

- > Wrote an article on diving in the red sea during shark season.
- > Released in the 2022 august issue of Business monthly.

Application specific CPU optimizer 2020-2022

 (work in progress)

- > Working on framework to optimize out unused hardware in HDL according to application use case.

LANGUAGES (Lines of Code)

Python(38k)

C++(35k)

L^AT_EX(25k)

Verilog(5k)

Kotlin(2k)

Rust(2k)

Dart(2k)

Javascript(2k)

Bash(1k)

SQL(1k)

HOBBIES

Recreational scuba diver

- > Licensed 2-star CMAS scuba diver.
- > Over 200 dives in the red sea since 2009.

PC enthusiast

- > Built own liquid cooled computer.
- > Administering homelab with file, surveillance, DNS servers.

3D printing enthusiast

- > Designed own 3D printed robot components.

Travel

- > Traveled to most of Europe, the U.S.A, the Middle East and Africa

COMPETITIONS

HackTrick Hackathon 2022

 DELL EMC

- > Built a reinforcement learning model to compete in material pipeline optimization challenges.

ICPC ACM 2019

 AUC

- > Entered local ICPC ACM.
- > Was the youngest participant.

Code Geist Hackathon 2019

 Seft Wahed

- > Created an app and its pitch in 72 hours.
- > Collaborated in a team of 4.
- > Developed a platform to address littering.

MATE ROV 2017-2019

 MATE

- > Joined university's Remotely Operated Vehicle team.
- > Contributed to circuit and mechanical design.

Science Fair 2014

 Student Expo

- > Won first place at high school level with a 4 wheeled remote controlled robot featuring a 3-axis arm.

SKILLS >

Git VCS

Linux

Docker

LANGUAGES >

English (native)

Arabic (native)