RAMI WAIL SHOULA

I am a passionate voyager in the midst of an endless ocean of knowledge. Bachelor in Nanotechnology and Nanoelectronics Engineering. Game Developer at ITI Game

Development Academy (GDA). Interests include computer programming, VLSI design, EDA tools, embedded systems, Internet of things (IoT), artificial intelligence (AI), mixed signals, IC design and video game development. Recently completed Deep Learning and Accelerated Computer Science Fundamentals specializations

on Coursera. Currently pursuing Game Design

and Development specialization on Coursera and have successfully completed the first course.

I am always keen on learning the latest cutting edge technologies and am constantly on a path of self-improvement.

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## EDUCATION

9 months Professional Training Program, Game Development at Information Technology Institute (ITI), Giza, Egypt

Courses/Programs covered include: -

Nov 2021 — Present

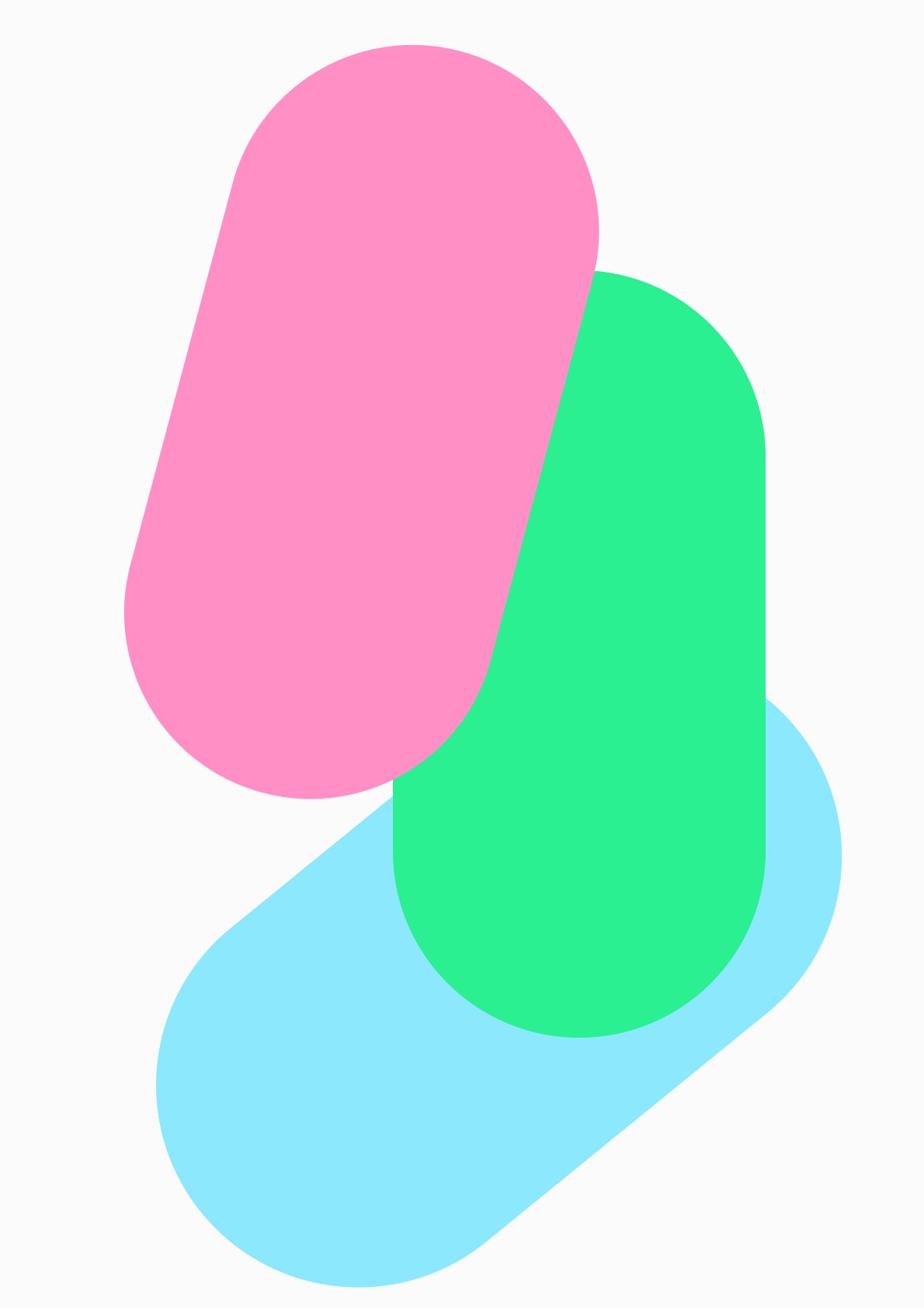
## TECHNICAL SKILLS

Git Expert

Matlab/Simulink Experienced C/C++ Expert

C# Expert

Unity Expert

C++ Object-Oriented Programming & Data Structures Visual C# .NET

Game Design UI & UX Design

Unreal Engine Expert System Verilog Experienced Python Expert

VHDL Skillful

HTML & CSS Skillful

Computer Graphics & Shaders Unity3D

Unreal Engine Game Network Artificial Intelligence Virtual Reality

B.S.C in Nanotechnology And Nano-Electronics Engineering at

University of Science and Technology at Zewail City (ZC: UST), Giza, Egypt

GPA around 3.0

Double Focus concentration: Nano-VLSI

Nano-Fabrication and MEMS

I.G.C.S.E. High School Degree at M.S.G British International School of Egypt, Cairo

2016 — 2021

2015 — 2016

Javascript Experienced PHP Beginner

Verilog A Expert

Cadence Expert

Microsoft Office Expert

## LANGUAGES

English Native speaker

Arabic Native speaker

French Good working knowledge

German Working knowledge Japanese Very good command

## COURSES

Accelerated

International General Certificate of Secondary Education. GPA 4.0. Magna cum laude.

## EMPLOYMENT HISTORY

Computer Science Fundamentals Specialization, Coursera

Dec 2021

Deep Learning

Summer Internship at Zewail City of Science and Technology · Part-time , Giza, Egypt

Jan 2020 — May 2020

Specialization, Coursera

Jan 2022

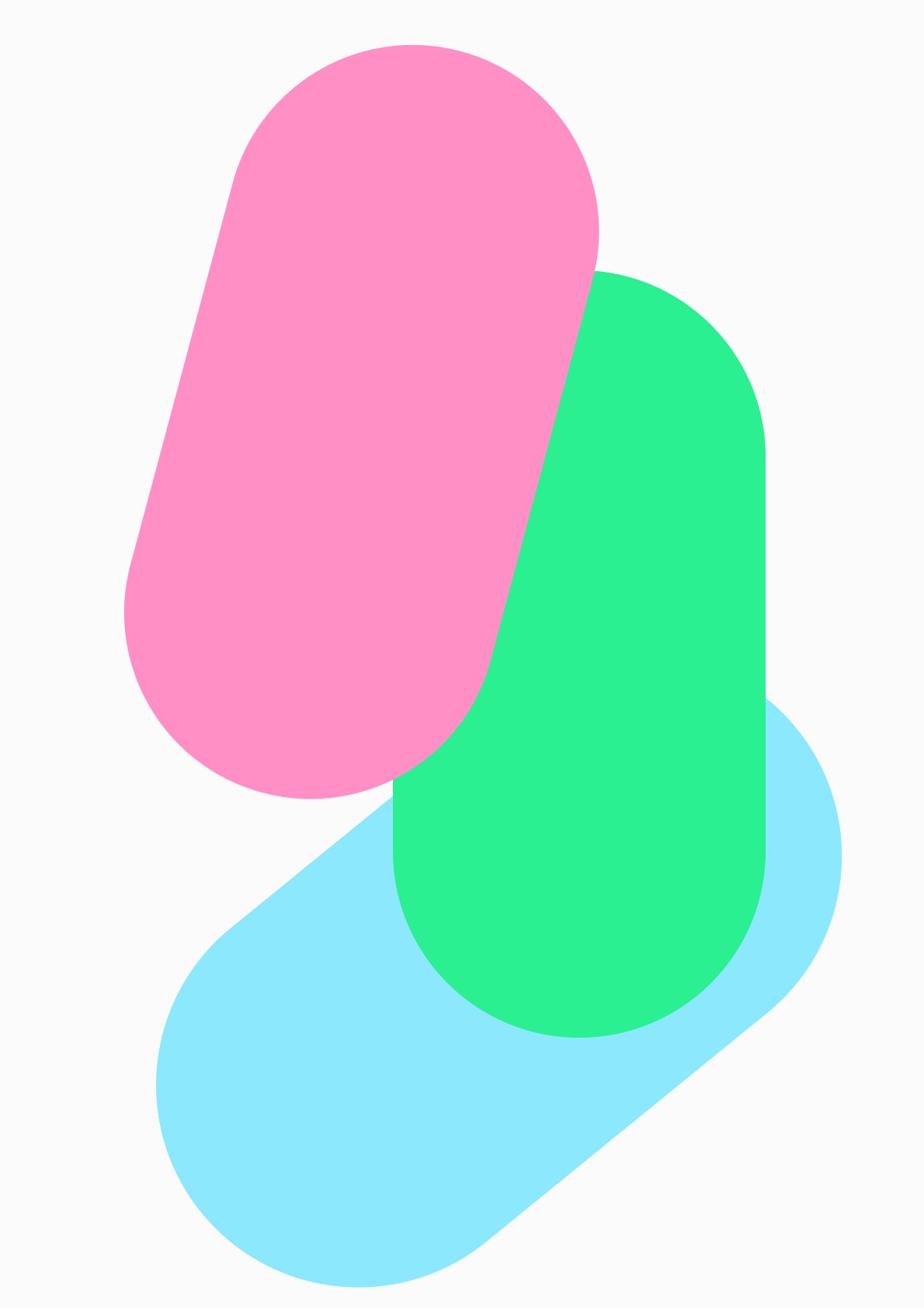
Embedded Software and Hardware Internship: Implementing real satellite Terminal Software. GSE, MPLS, SISAP communication protocols implementation. Hardware implementation of RTEMS on Xilinx zynq-7000 FPGA board.

Game Design and Development 1: 2D Shooter, Coursera

Junior Researcher at Zewail City of Science and Technology · Part-time , Alexandria, Egypt

Jan 2019 — Dec 2020

Jan 2022



## CAIRO EGYPT

Design and implementation of T-shape microfluidic chip for use in micro-droplet and Janus particle formation. Simulation

carried out on Cadence software. CAD tools utilized in modeling include SOLIDWORKS & CORELDRAW software. Physical design laser-printed at Egypt Japan University (E-Just) for practical testing.

Game Developer at Information Technology Institute (ITI) · Full-time, Giza, Egypt

Nov 2021 — Present

9 months professional Training Program Student. Game Programming Specialization ITI - Game Development Academy (GDA) - Intake I42. A product based program that will empower you to learn the required skills and knowledge in all aspects of Game Development from the basics to the advanced topics, from a real-world industry perspective to develop 2D, 3D and XR game applications to build a top-notch portfolio.

## EXTRA-CURRICULAR ACTIVITIES

IT, Media & Marketing committee head at EUROAVIA, Zewail City, Giza, Egypt

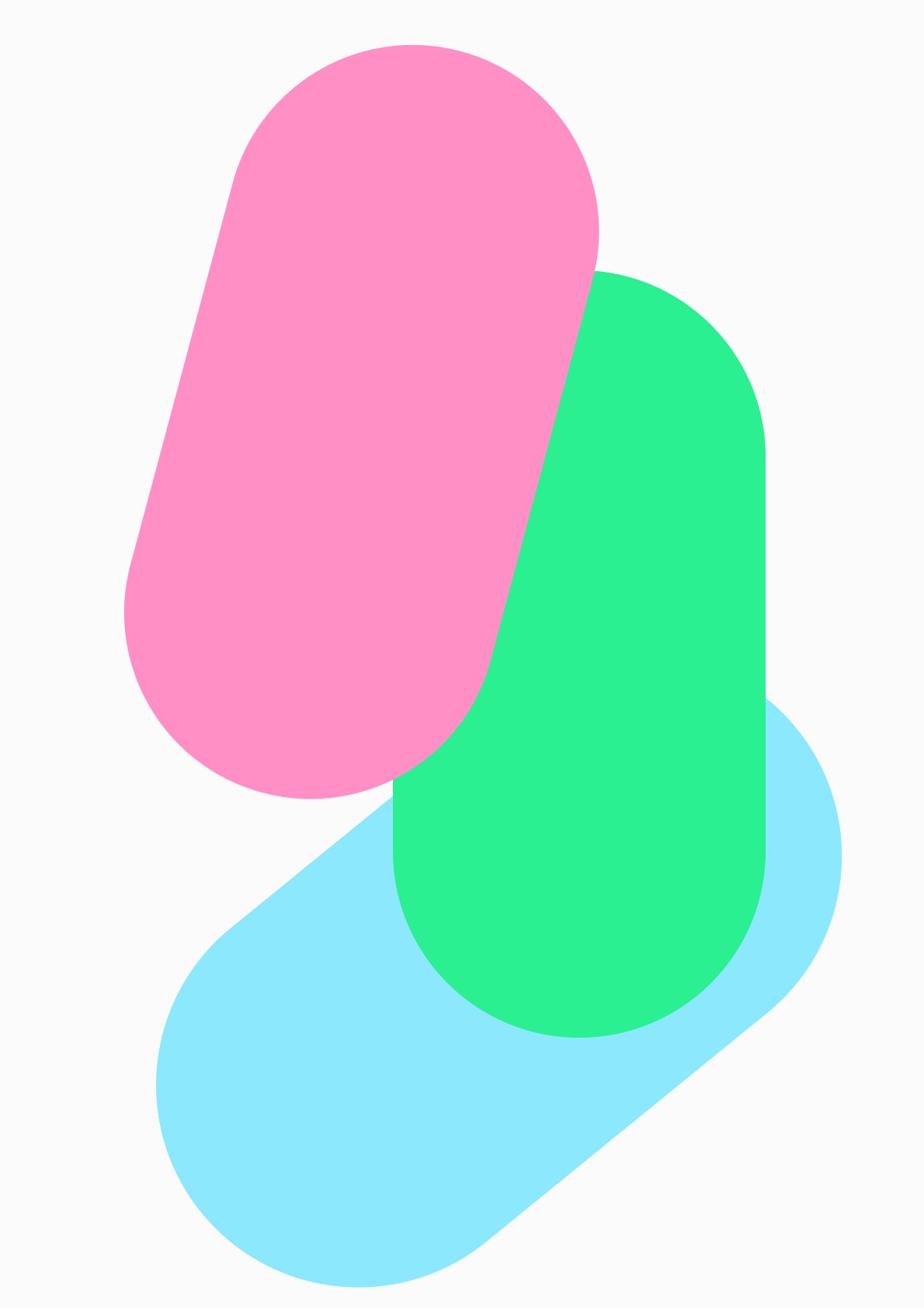
2016 — 2017

Committee member at IEEE, Zewail City, Giza, Egypt

2016 — 2018

Volunteer at Resala Charity Organization, Giza, Egypt

2017 — 2018

Volunteer for fundraising and aiding the charity organization in Cairo branch

## EXPERIENCE

CAIRO EGYPT

Undergraduate Mems and Microfluidics Graduation Project With Excellent Grade at ZC:UST under supervision of Dr. Noha Gaber, Giza, Egypt

2020 — 2021

Design of novel electrostatically powered peristaltic micropump with a single chamber and NED cantilever structure. A thorough fabrication recipe was developed. NED cantilever structure provided a permanent solution for pull-in effect in electrostatic based systems. Wide range of applications as it can be used in precise drug delivery/dosing systems, developing cooling systems for electronic systems, such as System-on-a-Chip and embedded systems, as well as Lab-on-a-Chip and testing kits. ITAC-CFP - ITIDA Funding.

ASIC Design And Implementation Of 32 Bit Mac Unit at ZC:UST under supervision of Dr. Hassan Mostafa, Giza, Egypt

2019 — 2020

Cadence Virtuoso Simulation design and implementation of 32 bit MAC unit with pre- and post- layout merits (delay, power &area)

Analog Mixed Signals 10-bit SAR ADC at ZC:UST under supervision of Dr. R. El-Damak, Giza, Egypt

2021 — 2021

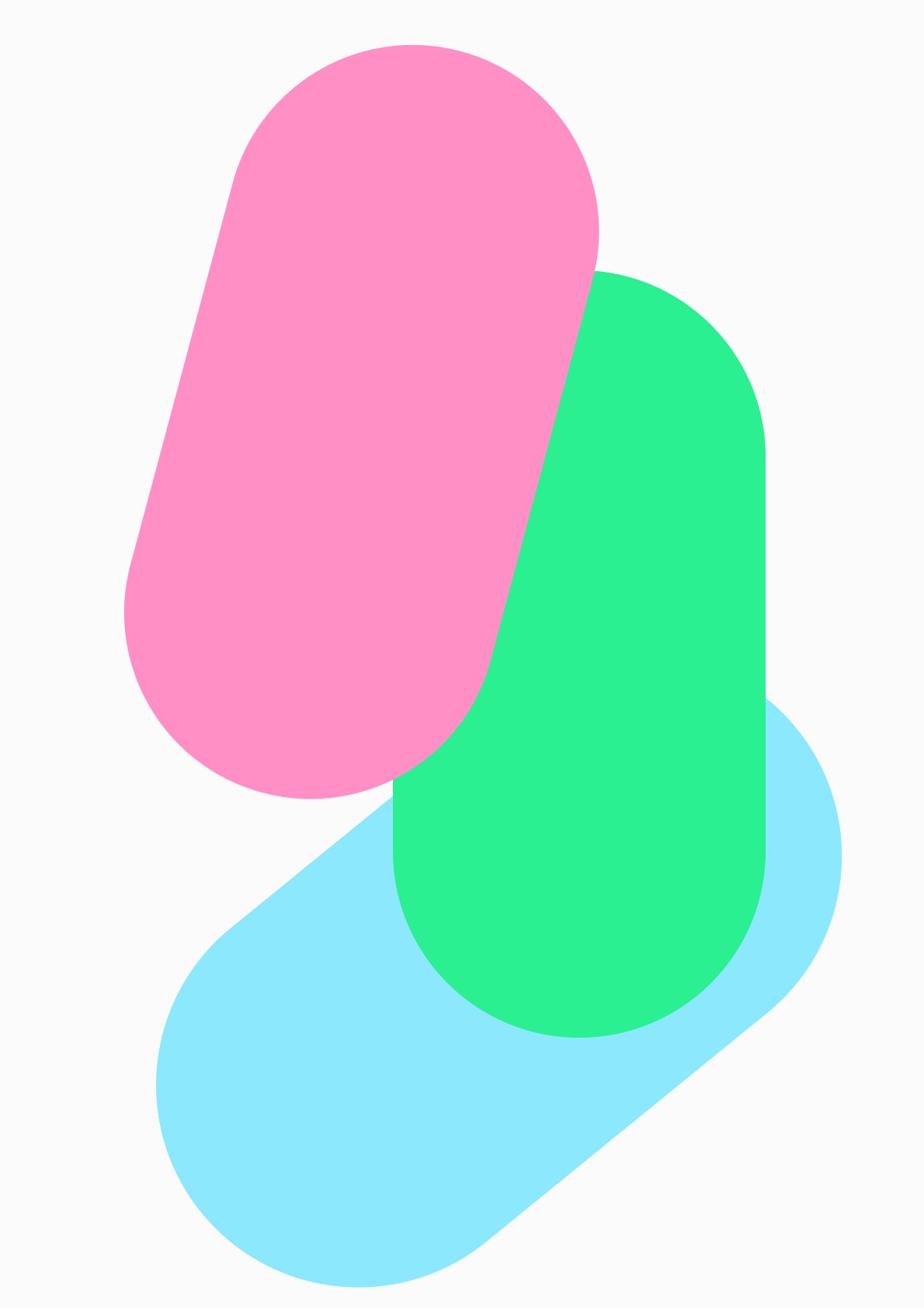
Design of a 10 bit ADC for wearable brain computer interface system using the 90 nm generic PDK on Cadence Virtuoso with 1 V supply with a 32 kHz sampling rate. Implementation of rate Successive Approximation Register (SAR) ADC, Sample and hold

circuit (SHA) and Digital to Analog Converter (DAC). The ENOB and SNR are measured to be 6.7, 42.22 dB respectively, giving a FOM

= 2.85pJ /Conv D step.

Testing And Verification Of IP In UVM Environment at ZC:UST under supervision of Dr. Hassan Mostafa, Giza, Egypt

2021 — 2021

Implementation of Universal Verification Methodology (UVM) using UVM 1.2 package on EDA playground / System Verilog. Testing and verification of encrypted intellectual property (IP).

## CAIRO EGYPT

C++ Connectivity Matrix and Partitioning EDA Algorithm at ZC:UST under supervision of Amr Nabil Helmy, Giza, Egypt

Oct 2019

Written a C++ program which partitions an even number of cells using Kernighan-Lin partitioning algorithm after obtaining the connectivity matrix of the cells. The input was a pin-oriented netlist, and the output clearly specified which cells belong to which block.

C++ EDA Functional Algorithmic Project at ZC:UST under supervision of Amr Nabil Helmy, Giza, Egypt

Nov 2019

Written a C++ code to read netlist data from a text file, extract the different paths, calculate the maximum propagation delay for each node, do proper partioning, perform floor-planning and then find the longest path and determine the suitable clock period.

## GAME DEVELOPMENT EXPERIENCE

OOP & Data Structures for Game Development, ITI GDA I42, Giza, Egypt

Combination of C/C++ OOP projects :

Nov 2021

Implement Magic box algorithm, and switch menu Console program

Employee Structure application using dynamic allocation , Line editor using pointers

Double linked list Stack, Queue binary search; bubble sort; selection sort

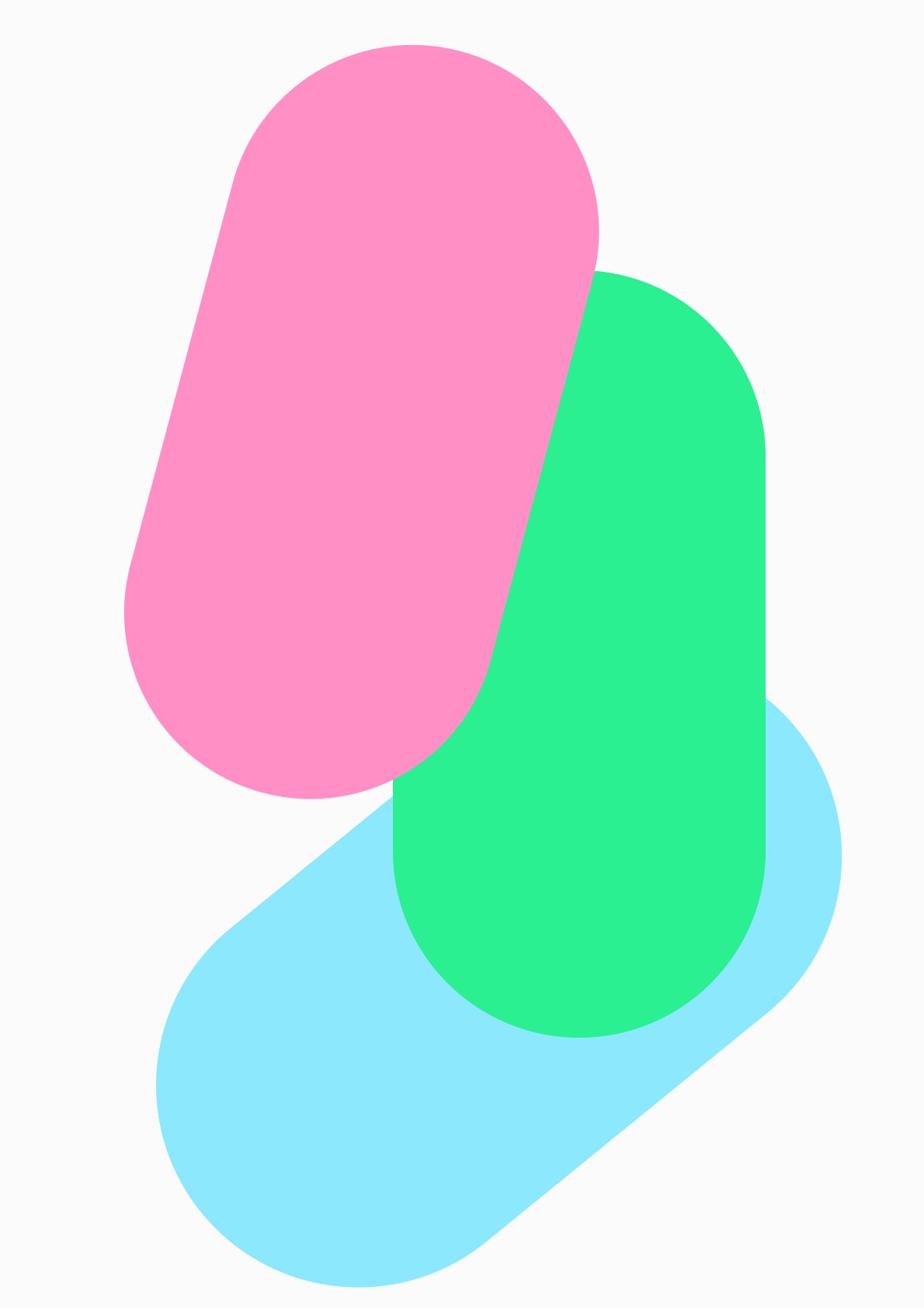
Traverse Binary Tree nodes using recursive functions

Design and Implement Class Complex, copy constructor to Class Stack

Operator overloading in Class Complex, Abstract Class pure virtual methods

C++ Resizeable 2D maze generation using vectors, ITI GDA I42, Giza, Egypt

Dec 2021



## CAIRO EGYPT

C++ Build of Console program that randomly generates a resizeable 2D maze based on vectors. SFML implementation to allow the user to translate in the generated maze paths to reach a generated goal then choose to replay or close the program.

Computer Graphics using OpenGL, ITI GDA I42, Giza, Egypt

C++ / OpenGL Implementation of Obj loader. Using glsl

Dec 2021

shader files to manipulate fragment and vertex shaders. Fractal (Mandelbrot) implementation. 3D simple maze GUI game using openGL utilizing created Mesh, Camera, Gameindow and Shader classes.

JavaScript and HTML5, ITI GDA I42, Giza, Egypt

Dec 2021

Created Space invaders web game. Phaser3 PC Web browser mini-jam game over the course of 3 days: Game concept -> Pen & Paper Prototype -> Game Pitch Document -> Game Assets & Art Creation -> Game programming and development -> Game Script

-> Game Demo -> Final Game (itch.io build).

Visual C# .NET, ITI GDA I42, Giza,

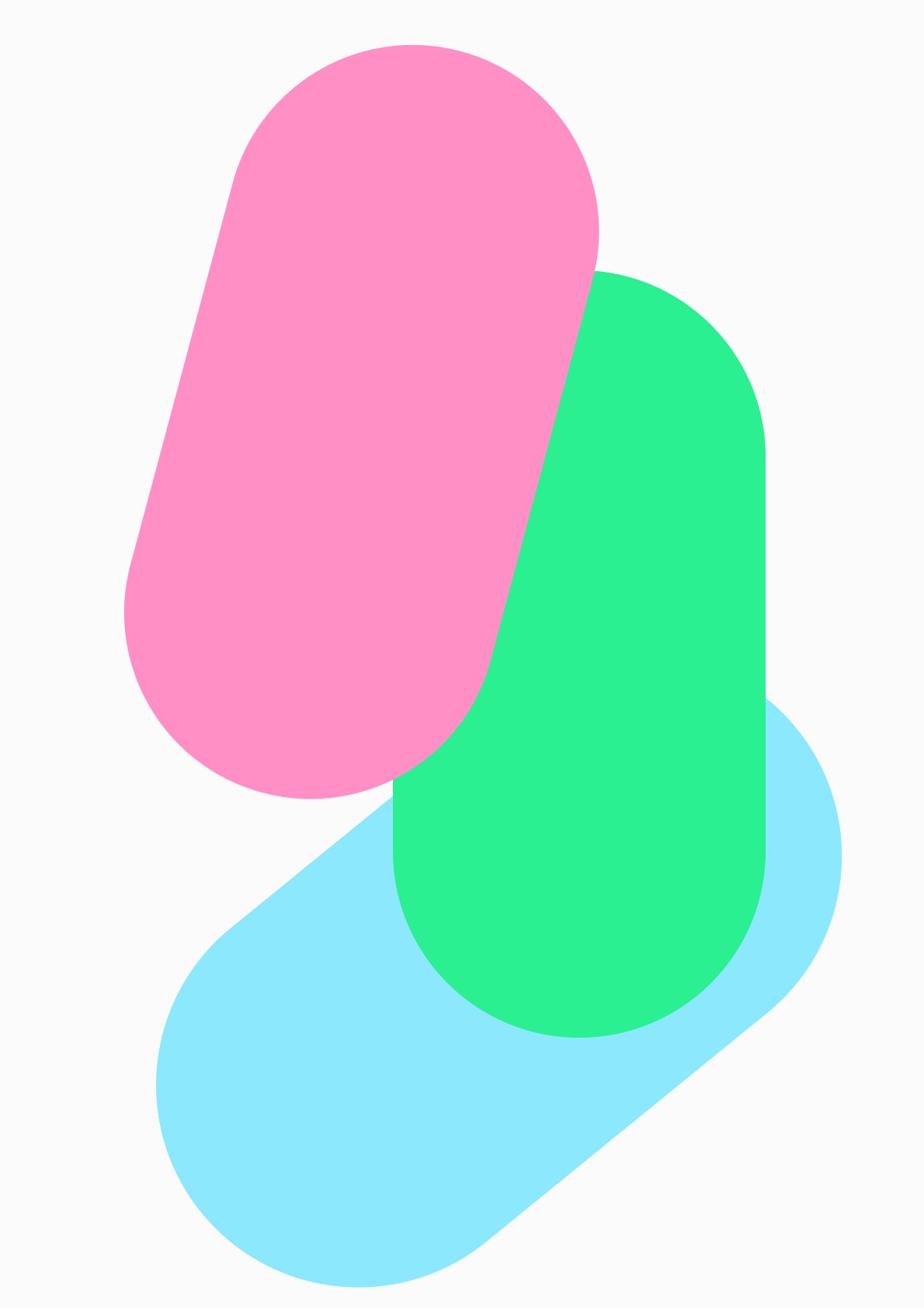
Egypt

Jan 2022

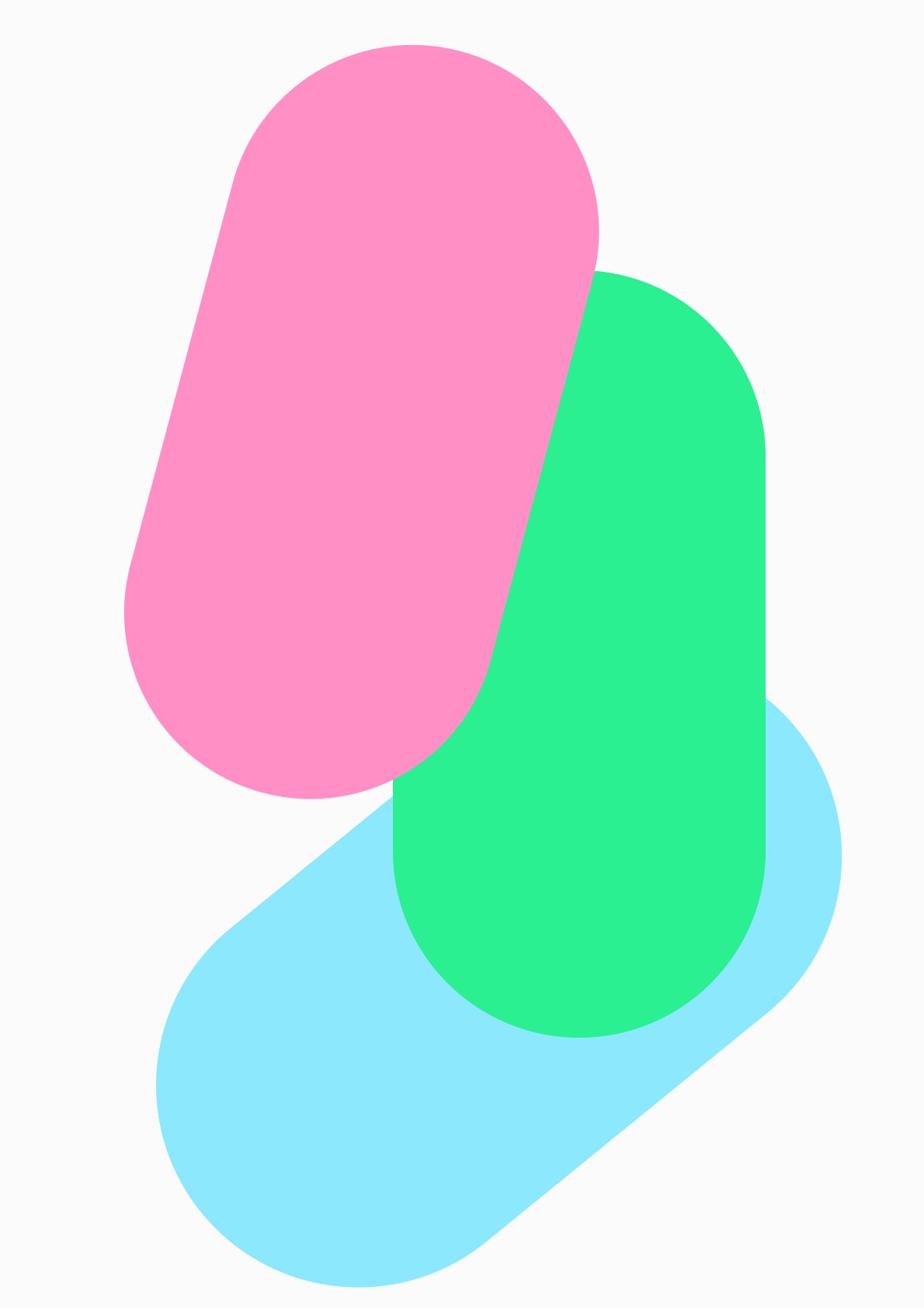
1. Language-Integrated Query (LINQ) Operators: Restriction, Element, Set, Aggregate, Ordering, Partitioning, Projection, Quantifiers, and Grouping
2. Company Layoff system
3. Object Pooling Patterns to to create a simple Bullets Pool
4. C# Full Examination UI system on C++ Data Structures concepts

Basic and Advanced Unity, ITI GDA I42, Giza, Egypt

Jan 2022 — Feb 2022

1. 3D Urban City Game Scene, Prefabs, Prefab variants, Various Lighting
2. 2D Platformer with idle, jump sprite animations and player movement
3. 2D tilemap platformer with various patrolling enemies and traps
4. 3D reflection and light probes baking and post-processing VR Space room
5. Android touch screen UI functions, canvas 2D memory game

## CAIRO EGYPT

1. UI leaderboard, registration form, puzzle Game with random generation builds
2. Tic Tac Toe game with singleplayer, multiplayer, AI, Scoreboard network framework
3. Cannon ball game with line renderer, physics and Procedural mesh generation
4. IK constraint, blend tree, animation rigging, scriptable objects and events
5. Node Based Shaders Fundamentals with amplify

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## DETAILS

Place of birth Egypt

Soft Skills Judgement and Decision Making

Strategic Project Management Leadership

Entrepreneurship Communication Teamwork ACHIEVEMENTS

British Council: CIPP Outstanding Achiever 2010 - 2011

Habitudes Leadership Training

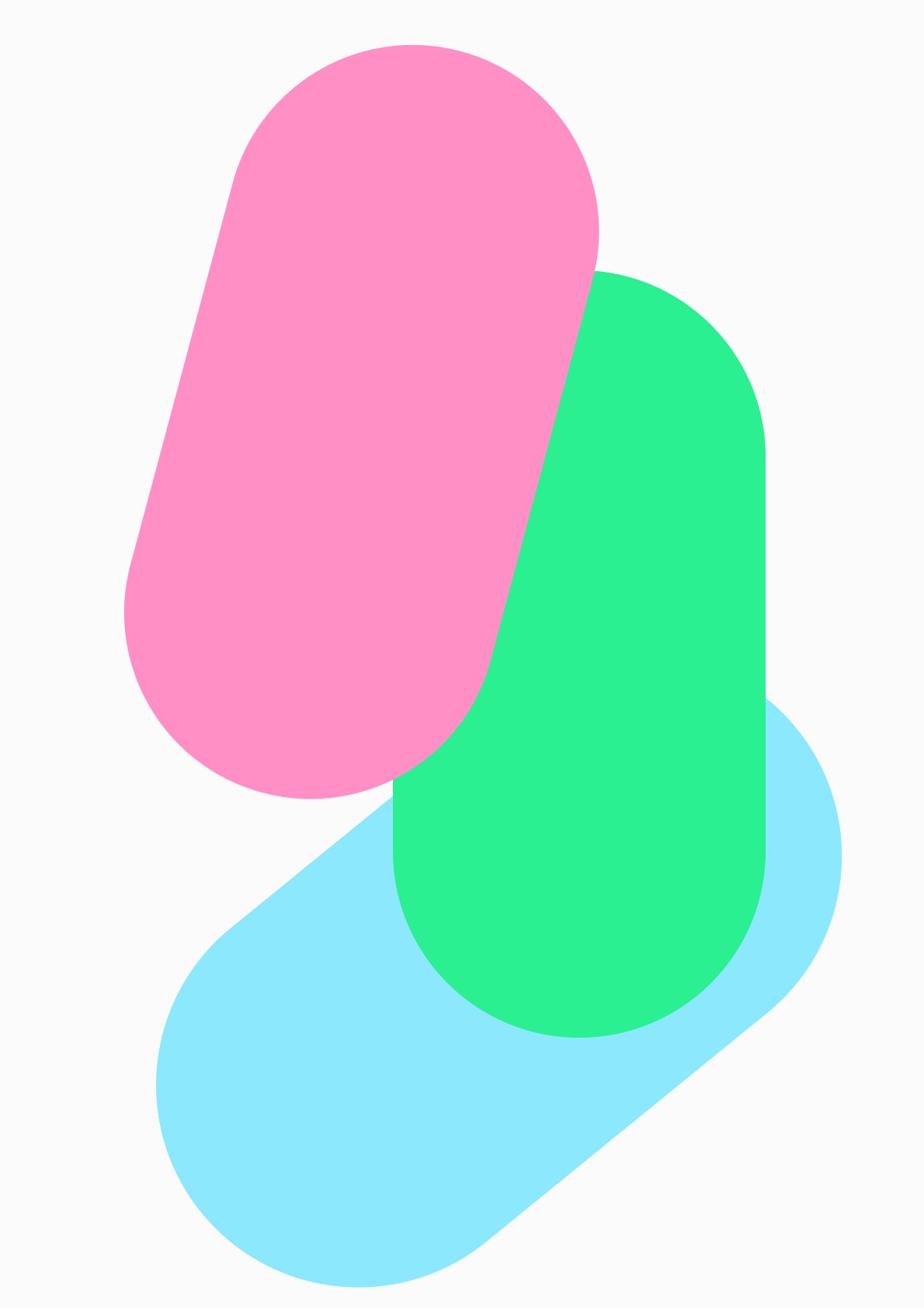
2014

2nd place in Alabakera TV Show competition

2016

PROJECTS

## CAIRO EGYPT

ASIC Flow: Optimization of Power, Area & Frequency of a designed RTL Code using DC Compiler Tool.

Two-stage Operational Amplifier using CADENCE (Pre-Layout Simulation)

Audio Amplifier Circuit – Design and Implementation using Cadence (Pre-Layout Simulation)

Analog to Digital Converter (ADC) using CADENCE

(Pre-Layout Simulation)

Modeling a 90-nm NMOS and PMOS With COMSOL

Diamagnetically levitated electrostatic micromotor (DLEM) model and fabrication

Temperature Sensor based on Light Transmittance inside an optical fiber using COMSOL

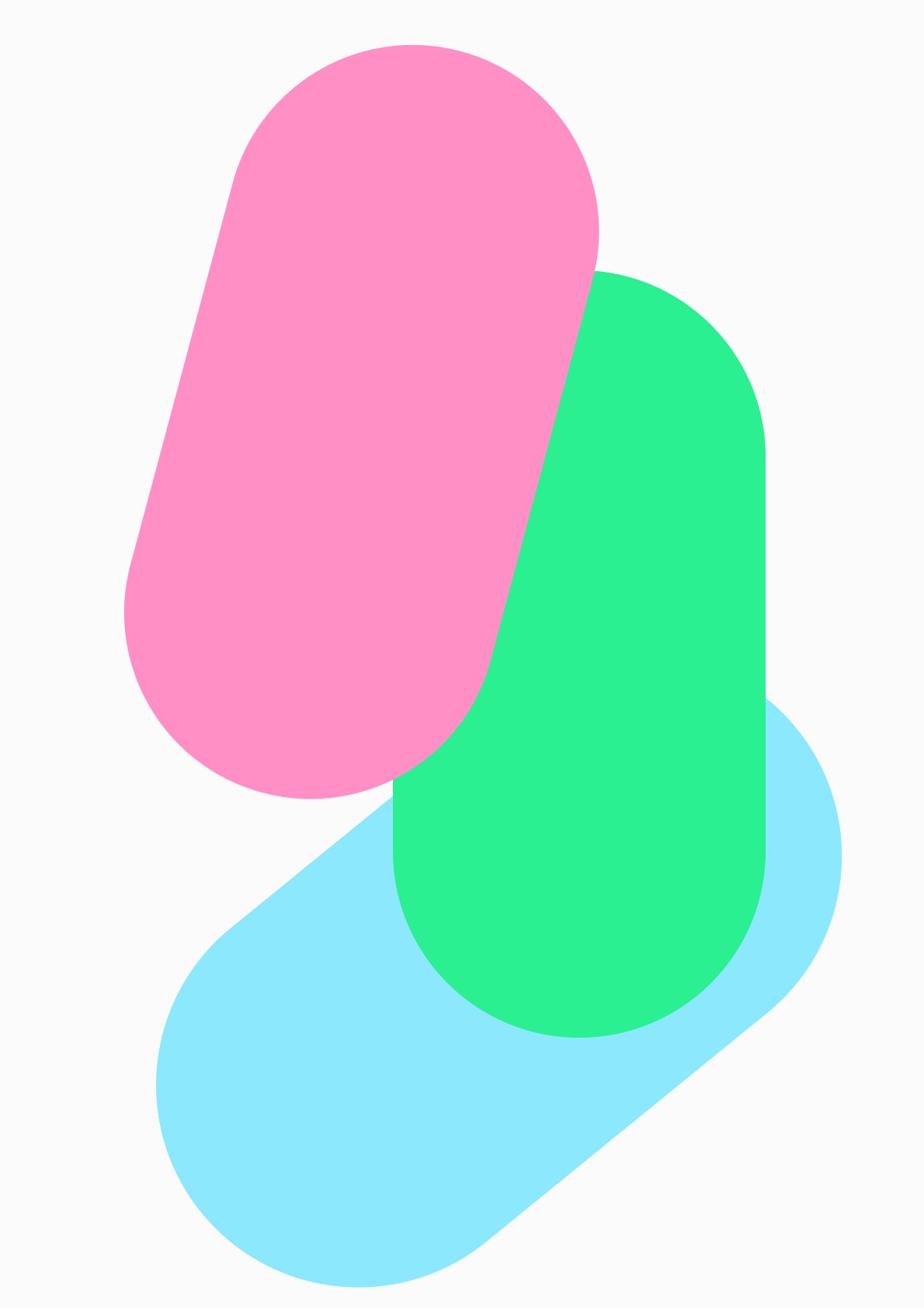
NMOS Transistor Fabrication using SENTAURUS

Write and develop C++ EDA tool to calculate connectivity matrix, partition, perform floor-planning and measure merits of each path.

Design RF / Mixed signals LNA in Cadence and ASITIC. Merits calculated for pre- and post- (DRC, LVS and PEX) layout simulation.

Adv. MEMS simulation of electrostatic microvalve.

## CAIRO EGYPT

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* + [in/romioshoula](http://www.linkedin.com/in/romioshoula) · [github.com/romioshoula](https://github.com/romioshoula) · [facebook.com/rami.shoula](https://www.facebook.com/rami.shoula) · romioshoula.itch.io · [artstation.com/romioshoula98](https://www.artstation.com/romioshoula98)

## CAIRO EGYPT