Arsany Samuel

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Experience

Jun 2021 - Mar 2022
"Technical/Site Mechatronics Engineer"
Specialist Company for Engineering Solutions.
Programming machine vision applications, graphical user interfaces, database integration, network and serial communication.
Mechanical, electronic circuits and board design.
Preforming and supervising installations and maintenance of solar heaters on site.

2019 - present
"Co-Founder"
Sibotics.
Co-Founded IOT and electronic design services startup company.

Nov 2018 - Aug 2020
"ROV Pilot, Electrical/Mechanical/Software Team Member."
Vortex Robotics.
Participated in several underwater robotics competitions with two academic teams.
Electrical/Mechanical member and ROV pilot in 2019.
Software team member in 2020.

2018 - present
"Co-Founder"
Comet.
Co-Founded startup company providing electronic, mechanical and software solutions including design and fabrication services and project implementation, also competing in the market with innovative industrial solutions and products.

Education

2016 - 2021
"B.S.E. in Agricultural Engineering"
Faculty of Agriculture, Alexandria University
Participated in many research projects and publications, along with several student activities and organizations.
Graduation Project: Solar powered robotic arm using image processing, machine vision and artificial intelligence to identify and collect agricultural products and fruits.

Skills

- **Software**

Programming Languages: C, C++, Python, Javascript, SQL, Shell/Bash scripting.
Frameworks: OpenCV, Qt, Tensorflow, ORM(SQLAlchemy), Flask.
Markup Languages: LaTeX, HTML/CSS, Markdown.
CAD Modeling: SolidWorks, Sketchup, AutoCAD.
Electronics: EagleCAD, KiCAD, Proteus, NI Multisim.
Others: Linux, Git, Command Line tools, Nginx, Networking tools and configuration, Remote access tools.

• Hardware

Electrical: Electronics and electrical circuitry, microcontroller programming, SBCs, PCB fabrication.

Mechanical: Material selection, machining and fabrication processes, machine assembly, pneumatic and hydraulic circuits, sealing techniques.

Projects

Irrigation Controller	Project Funded by the Ministry of Higher Education, a microprocessor and microcontroller based irrigation control system, using state-of-art irrigation researches and equations and aquired data from wireless weather stations and sensors to determine the watering requirements, equipped with a fully costumizable kiosk user interface, mobile application control, web interface, wired and wireless communication methods
Robotic Arm	Graduation Project funded by the Ministry of Higher Education, a Solar Powered Robotic Arm to Identify and Collect Agricultural Products with 6 degrees of freedom, using machine learning and computer vision for identification and using air-powered manipulator to to collect fruits and agricultural products.
Zote ROV	Remotely Operated Underwater Vehicle with two manipulators and quadrable camera vision system. Designed, fabricated and programmed for MATE ROV competition 2020 and Underwater Sea Challenges 2020.
Backwash Controller	Microcontroller based control unit for automizing the backwash process of drip irrigation gravel and sand filters by a user defined timing, differential pressure or a hybrid system.
Komodo ROV	Remotely Operated Underwater Vehicle provided with several sensors, a manipulator and a triple camera vision system. Designed, fabricated and programmed for MATE ROV competition 2019 and UMVC competition 2019.
Power Data Logger	Microcontroller drived device on a board for logging data of power, voltage and current using sensors, processing readings and storing it into an SD card.

Training and Certifications

September 2022	"CS50x" *Harvard University* `certificates.cs50.io/fe015e39-3d8e-48ad-a13b-4177ec41e108.pdf`
July 2021	"CSWE: Certified SolidWorks Expert - Mechanical Design." *Dassault Systèmes* C-6NMDPAQ9UE
November 2019	"Entrepreneurship and Small Business Course (ESB) - 40Hr." *Career Development Center & Entrepreneurship - CDCE and Certiport Egypt*