Arsany Samuel

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Summary

Experienced Agricultural Engineer with vast experience in electronics, programming, software, mechanical and electrical design, manufacturing methods and techniques. Seeking self-improvement and career elevation.

Education

2016-2021	"B.S.E. in Agricultural Engineering" *Faculty of Agriculture, Alexandria University* Participated in several research projects and publications. Graduation Project: Solar Powered Robotic Arm to Identify and Collect Agricultural Products

Experience

2021-PRESENT	"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.
2019-2021	"Co-Founder" *Sibotics.* Co-Founded IOT and electronic design services startup company.
2019-2020	"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.

Skills

- ## Software

  Programming Languages: C/C++, Python, Shell/Bash scripting, LaTeX, HTML/CSS, Markdown, SQL, Lua.
  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, Pandoc, Office Suites, GIMP.

- ## Hardware

  Electrical: Electrical and electronic circuits, microcontroller programming, SBCs, PCB fabrication, electrical installations.
  Mechanical: Material selection, machining and fabrication processes, machine assembly, pneumatic and hydraulic circuits, sealing techniques.

- ## Languages

  Arabic(Mother Tongue), English (Proficient).

Projects

BATTERY TESTER	Commercial ready battery life tester for solar systems, cars and other applications acid and dry batteries.
IRRIGATION CONTROLLER	Project Funded by the Ministry of Higher Education, a microprocessor and microcontroller based irrigation controller unit, using state-of-art irrigation researches and equations and wireless weather stations and sensors to determine the water requirements, provided with a fully controlled kiosk user interface, mobile application control, web interface, wired and wireless communication
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 the fruits.
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

July 2021	"CSWE: Certified SolidWorks Expert - Mechanical Design." *Dassault Systèmes* C-6NMDPAQ9UE
July 2021	"CSWPA-SU: Certified SolidWorks Professional - Advanced Surfacing." *Dassault Systèmes* C-KWE4RLF8MB
June 2021	"CSWPA-SM: Certified SolidWorks Professional - Advanced Sheet Metal." *Dassault Systèmes* C-AG8RJBFT5S
April 2021	"CSWPA-WD: Certified SolidWorks Professional - Advanced Weldments." *Dassault Systèmes* C-HUZLWBG3NX
April 2021	"CSWPA-DT: Certified SolidWorks Professional - Advanced Drawing Tools." *Dassault Systèmes* C-EFG2MLZRDV
December 2020	"CSWP: Certified SolidWorks Professional - Mechanical Design." *Dassault Systèmes* C-5QRD4ZWS9H
July 2020	"CSWA: Certified SolidWorks Associate - Mechanical Design." *Dassault Systèmes* C-39UJYLZ5MG
November 2019	"Entrepreneurship and Small Business Course (ESB) - 40Hr." *Career Development Center & Entrepreneurship - CDCE and Certiport Egypt*

Volunteering

2019-2020	"Project Management Member" *Enactus Alexandria University* International non-profit organization dedicated to achieve the UN's sustainable development goals.
2019	"Instructor" *C and Arduino Course* Voluntary C language, Electronics and Arduino course organized by the Agricultural Engineering Department for students