

# Yahya M. Gilany

Software Application Developer  
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## Education

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- University of Cincinnati, Cincinnati, OH, USA** 2016-2018  
Master of Science M.Sc., School of Information Technology.  
**Concentration:** Networking and Infrastructure Track – Machine Learning.  
• Awarded:  
• Dean's List 4.0 GPA (Spring 17, Fall 17, Spring 18)  
• Graduate Assistantship (Fall 16, Spring 17, Fall 17, Spring 18)  
• Cumulative GPA: **3.974**
- University of Cincinnati, Cincinnati, OH, USA** 2015-2018  
Bachelor of Science B.Sc., School of Information Technology.  
**Concentration:** Information Technology, Software Application Development.  
• Awarded:  
• UC Global Scholarship  
• Dean's List 4.0 GPA (Spring 16, Fall 16, Spring 17, Fall 18, Spring 18)  
• Cumulative GPA: **3.985**
- Cairo University, Egypt** 2012 - 2015  
Bachelor of Science B.S., Faculty of Engineering  
**Concentration:** Aerospace and Aeronautics.  
Transferred to the University of Cincinnati before the completion of the program

## Computer Skills

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- Programming Language:** JavaScript, TypeScript, C#, SQL, Java, C/C++, Python, R, HTML5/CSS3, MatLab/Octave.
- Platforms, Frameworks, and Technologies:** Node.js, Angular.js, Ionic, Xamarin, ASP.Net Core 2.0, Microsoft SQL Server, MySQL, PostgreSQL, NGINX, Docker, Kubernetes, JQuery, Unity (Game Engine), SolidWorks (3D Modelling), LabVIEW.
- Operating Systems:** Linux (Ubuntu, SUSE), Windows Server, macOS, Windows
- Photo and Video Editing:** Photoshop, Premier.

## Work Experiences

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### UC Information Technology Solutions Center

- Web and Software Application Developer Sept. 2015-Apr. 16  
Fall 15: Part-time  
Spring 16: Part-time
- Architected a client-server software solution for a Fortune500 public retail enterprise.
  - Developed a client-server software solution for a Fortune500 retail company responsible for data collection from over 700 business units.
  - Designed and developed the database for the solution.
  - Participated in client sessions and meetings including requirement gathering and demonstrations.
  - Participated in the deployment sessions of the application to the client's servers.
  - Wrote scripts using Node.js to setup, build, and auto-populate databases with testing data.
- Senior Software Developer/Team Lead May. 16- Dec 17  
Summer 16: Co-Op  
Fall 16: Part-time /GA<sup>1</sup>  
Spring 17: Part-time/GA  
Summer 17: Co-Op
- Architected and designed a scalable microservice-based backend services and APIs for a large-scaled eco-system responsible for consuming, analyzing, and producing reports on large volumes of data for Fortune500 retail company.
  - Designed and developed databases for the eco-system.

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<sup>1</sup> GA: Graduate Assistant

- Developed and implemented the backend services and APIs for the system using NodeJS, Microsoft SQL Server, Redis, RabbitMQ, Docker, Microsoft R Services.
- Architected, designed and developed the frontend tools and services for the eco-system using Angular.js, Bootstrap, and Express.js.
- Lead a team of 4 developers working on multiple applications and aspects of the eco-system.
- Work independently with minimal supervision to ensure team members meet high quality standards and project deadlines.
- Lead project bi-daily standups to track progress and address architecture and development issues.
- Coordinated the work and efforts between the eco-system development team and another consuming the data from our eco-system.
- Participated in client sessions and demos including requirements gathering sessions and demonstrations.
- Presented the eco-system database design to the client's developers team.
- Managed and performed the deployments to the internal development and staging servers.
- Deployed the application to the client's production servers.
- Worked on migrating a large-scaled system from Mongo databases and stack to an SQL-based one.
- Implemented Unit testing for the various components of the projects.
- Wrote scripts using Node.js, and gulp task runner to transpile the code from the most up-to-date JavaScript standards, ECMA6, to the standards supported by most browsers. The script also, minified the front-end code to optimize loading speed of the web applications.

#### Lead Developer

Dec 17 - Apr. 18

Spring 18: Part-time/GA

- Lead the development teams for over seven large-scale projects at the ITSC.
- Represented the ITSC in requirement gathering sessions.
- Interviewed over 15 new hires for the ITSC co-op positions.
- Designed and built databases for new projects and solutions.
- Set-up DevOps environments and tools such as Drone.io, Docker, Sentry Error Loggings for 10+ projects, applications, and services.
- Researched and implemented software development best practices such as test-driven development.
- Implemented Unit testing for the various components of the projects.
- Mentored and trained new developers.
- Implemented a secure continuous development and continuous integration pipeline where the code gets tested before its deployment.
- Redesigned and restructured the source code's version control model increasing productivity and ensuring faster testing and delivery, and less merge mistakes in the production code.
- Reviewed code for 245+ merge requests from 20+ projects in a gross estimation of 300K lines of code.
- Wrote scripts using python to automatically convert Statement of Work documents into GitHub milestones and issues.
- Wrote scripts using python to move GitHub issues from one project to another.

## Research and Publications

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### Conference Presentations

Gilany, Y. & Said, H. (2018). Automated Reporting System for Funding and Grants for Juvenile Correction Programs. *University of Cincinnati IT Research Symposium*. (Accepted).

Kunapareddi, V., Gilany, Y. & Said, H. (2018). An Innovative Solution to Bridge Industry and Student Needs. *Ohio Higher Education Computing Conference*. (Accepted).

### Journal Papers

Kunapareddi, V., Gilany, Y. & Said, H. Web-Based Multi-tenant Test Administration Tool. (in progress)

## Articles and Blog Posts

Gilany, Y. Customizing the terminal bash prompt with Git Repo Status. Accessed at: <http://yahya-gilany.com/blog/articles/2017/06/03/Customizing-the-terminal-bash-prompt.html>

Gilany, Y. Implementing A Modal Within a Modal in Bootstrap3.0. Accessed at: <http://yahya-gilany.com/blog/articles/2017/06/05/Modal-within-a-modal-bootstrap.html>

Gilany, Y. Eco-System Backend architecture for a Fortune 500 Public Retail Company. Accessed at: <http://yahya-gilany.com/blog/articles/2017/06/06/Eco-System-Architecture.html>

Gilany, Y. Introduction to Design Patterns. Accessed at: <http://yahya-gilany.com/blog/articles/2017/06/17/Design-Patterns.html>

Gilany, Y. Custom Orders using SQL or Javascript. Accessed at: <http://yahya-gilany.com/blog/articles/2018/02/24/Custom-Sort.html>

Gilany, Y. Introduction to Machine Learning. Accessed at:

## Software Publications

Gilany, Y. Pomodoro - Visual Studio Code Extension

Accessed at: <https://marketplace.visualstudio.com/items?itemName=yahya-gilany.vscod-pomodoro>

Gilany, Y. Terminal Launcher - Visual Studio Code Extension

Accessed at: <https://marketplace.visualstudio.com/items?itemName=yahya-gilany.vscod-terminal-launcher>

Gilany, Y. CanIUse – Visual Studio Code Extension

Accessed at: <https://marketplace.visualstudio.com/items?itemName=yahya-gilany.vscod-caniuse>

Gilany, Y. API Doc – Paw Cloud Extension

Accessed at: <https://paw.cloud/extensions/ApiDocGenerator>

Gilany, Y. Clock – Visual Studio Code Extension

Accessed at: <https://marketplace.visualstudio.com/items?itemName=yahya-gilany.vscod-clock>

## Projects \*Further details on the projects are available on my e-portfolio site.

### Data Collection Application

Sept.2015

A collection web application developed for a Fortune 500 public retail company with rigorous business rules and requirements. Built initially as a Monolith application in a client-server architecture, then decomposed and refactored to be part of the Eco-system described below. The system was built with Node.js and JQuery.

### Eco-System for a Fortune 500 Public Retail Company

Sept. 2016 -Present

An Eco-System consisting of 6 applications (Web, Mobile, AR, VR) interfacing with a RESTful API gateway developed in a microservice architecture. The system consists of 11+ microservices communicating with different services and tools such as Microsoft SQL Server, Redis, R server, Reporting Service, ActiveDirectory, etc. As the lead developer on the project, I:

- Architected, and designed the backend services and APIs.
- Designed and developed the database which consisted of 50+ tables and views and 300+ queries.
- Maintained and reviewed the code to ensure quality.

### Beyond Analytics/ Strategic Planning Application

Sept.2016 - Present

A web application built as part of the eco-system to serve as a playground for data analysts to investigate and improve their businesses. It is built using NodeJS, and AngularJS. The application is packaged with machine learning, and data analytics algorithms developed using R programming language and integrated into the system using the SQL Server 2016.

**Lean-Manufacturing Solutions**

Jan. 2018 - Present

A system to implement Lean processes in food manufacturing systems and factories. The solution is a client-server solution consisting of a cross-platform mobile application/client built using the Ionic3 platform, a web application/client built using angular5, and a Gateway API/server built using C# and Asp.Net Core 2.0 Framework. As the lead developer, I architected the solution, initialized the development of the web and API projects for the development team to adopt. I also set up the CI/CD pipelines and managed the deployments.

**CanSat**

Feb. 2015 -Apr. 15

An Educational Nanosatellite microcontroller project is utilizing various sensors, actuators, transmitters, and receivers. It consists of two Microcontrollers communicating through radio transmissions from the satellite to a ground station. The satellite collects temperature, humidity, pressure, geolocation, acceleration and orientation measurements, stores it onto an SD card, and then sent to the ground station where data was processed and visualized in a dashboard built with LabVIEW. A PCB board was designed and manufactured to electrically connect the sensors and electric components of the device. I also wrote an Arduino Library to interface with the GPS module. The components used include Atmega328, MPU-6050 (Accelerometer and Gyroscope sensor), BMP085 (pressure sensor), DHT11 (humidity and temperature sensor), RF or Xbee (for wireless communication through UART protocol).

**Dragon Shooter – Augmented Reality, AR Game**

Feb. 2017 - Apr. 17

A group school project for the IT7031C Advanced Technologies for Game Development class. It was built using Unity Game Engine to provide an interactive game environment where you can see and shoot down dragons flying around you in your real setting.

**Pomodoro - Visual Studio Code Extension**

April, 2017

A productivity/time-management tool developed for Visual Studio Code to help developers stay on task and more efficient with their time. A personal open-source project, built with TypeScript in an Object-Oriented Fashion. The extension was adopted and downloaded 5400+ times.

**Terminal Launcher - Visual Studio Code Extension**

March, 2017

A productivity/DevOps tool for developers to configure their projects' terminal windows with commands.

A personal open-source project, built with TypeScript in an Object-Oriented Fashion. The extension was adopted and downloaded 1080+ times.

**VSCode Clock - Visual Studio Code Extension**

June, 2017

An extension to the Microsoft Open source Integrated Development Environment, Visual Studio Code to show the time and date in the editor in a style and format configured by the user. The extension was adopted and downloaded 300+ times.

**Can I Use - Visual Studio Code Extension**

April, 2017

A developer tool that provides an easily accessible up-to-date browser support tables for support of front-end technologies on desktop and mobile web browsers. It allows users to have access to the resource from the comfort of their IDE. The extension was adopted and downloaded 85+ times.

**API Doc Generator – Paw Cloud Extension**

July, 2017

A productivity tool for developers who use the *Paw* HTTP Client application. The extension allows you to automatically generate API documentation based on the parameters passed and the results received from the API being request. The platform doesn't show download metrics of the extension.

**“To do” List Android Application**

Jul. 2017 – Aug. 17

A school group project for the IT3046 - Mobile device Programming class at the University of Cincinnati. The application is a Native Android application built using Java. I was responsible for the backend development; including:

- built a RESTful Web API using C# and .Net Core framework.
- Creating the Data Models and classes for both the API and the mobile

- application.
- Handling the Networking and HTTP requests and threading of the mobile application processes.
- Parsing HTTP responses from non-Java formats (JSON) into Plain Old Java Objects (POJO).
- Building Data Access Objects (DAO) that provides an interface for the application to interact with the underlying persistence storage services (Stubs and actual).
- Connecting the backend to the UI.
- Writing Unit tests for the application.

### **Customer Relationship Management (CRM) application**

April 2017

A school group project for the IT3045- Contemporary Programming class at the University of Cincinnati. The application is a two manages customers, payment, and shipping information. It also manages an inventory of products and allows the customers to purchase them.

### **Pizza Order application**

A school group project for the IT3045- Contemporary Programming class at the University of Cincinnati. The application has two interfaces, one for customers to custom make their pizzas, place their orders and receive their receipts, and another for chefs to streamline the pizza-making process. The development includes designing the database that handles the data persistence of the application.

### **The BotFather, a bot for Slack messaging application**

November 2017

An automated bot that can be integrated into the messaging application, Slack. The bot is used to facilitate the standup meetings through the messaging application, slack. The project is open-sourced and can be self-hosted.

### **Xamarin University Projects**

2017

A collection of applications built while enrolled in Xamarin University. All the applications are cross-platforms that can be deployed to iOS, Android, or Windows Phone.

- Books Client.
- Calculator.
- Tunes.
- Grocery List.
- Food Tracker.
- Internet Connection Status.

### **Smart-Home Embedded Systems project**

August 2014

A capstone graduation project from the Embedded Software and Systems Diploma. The system was built using two microcontrollers of the AVR family, specifically Atmega16. Users can authenticate themselves using a passcode stored in an external EEPROM and communicated with through I2C Protocol. The system controls multiple lights and brushless motors through Pulse-Width Modulation, PWM, controlling digitalized curtains and blinds. The system protocols and libraries were implemented from scratch using the C Programming language.

## **Trainings and Courses**

### **Trainings**

CanSat Training Program at the SSTLab, Space Systems and Technology Laboratory.	84 Hours
Embedded Systems Software Diploma, Certified	170 Hours
Entrepreneurial Development Skills Program	60 Hours
Certified Xamarin Developer	In-progress
Google Cloud Platform Certification - Cloud Architect (GCP)	In-progress

### **Online Courses**

- Machine Learning (Stanford University), Certified
- Project Management (udemy.com), Certified
- Programming Foundations: Programming
- Programming Foundations: Object-Oriented Design
- Programming Foundations: Database

- Angular 2 Essential Training

## Achievements

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- The **President's Volunteer Service Award** from The President of the United States, *Barack Obama*.
- **Outstanding Volunteer Service Award** from the United States Department of State.
- Participated in the US Department of States-funded **international exchange program**, Kennedy-Luger Youth Exchange & Study Program (**KL-YES**).
- University of Cincinnati | CECH | **Dean's List 4.0 GPA** (Spring 16, Fall 16, Spring 17, Fall 17, Spring 18)
- Awarded the University of Cincinnati **Global Scholarship**
- Awarded the UC's School of Information Technology **Graduate Assistantship**.
- **Outstanding Student** Award from LCAT academy, Learning Center for Applied Technology, during my exchange year at the US.

## Activities

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<b>Kapolei Robotics Team (Team 2445)</b>	2010-11
Programming sub-team of Kapolei High School Team, HI, USA	
• Used LabVIEW.	
<b>CEPCP</b>	Jan. 2014 – Jun. 14
Programming and Problem-solving Student Club	
<b>Space Systems Technology Laboratory (SSTLab), Egypt</b>	Dec. 2014 – Aug. 15
Member of the CubeSat research Team.	
Participant in the CanSat Training Program.	
CanSat Design-Build-Launch Competition	
- Responsible for the CanSat's On-Board processors and programming	
<b>Student Government</b>	2012-13
Faculty of Engineering, Cairo University	
Cultural and Political Committee	
<b>Legislative Internship Program in Hawaii State Senate</b>	December 2010
Worked as an Assistant to the Representative Sharon Har of the State of Hawaii.	
<b>Better Understanding for Better World (BUBW)</b>	December 2010
Cultural and Religious Tolerance and Dialogue program.	
<b>Department of State Alumni Connect</b>	November 2013
Experiential Team Building Training. At the US Embassy in Cairo, Egypt	