


# MAHMUD IBRAHIM



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## PROFESSIONAL SUMMARY

Solution-driven professional excelling in highly collaborative work environment, finding solutions to challenges and focused on customer satisfaction. Proven experience developing consumer-focused web applications using HTML, CSS, PHP, JavaScript and Laravel Framework. Experience in building IoT gadgets, devices and web application, meeting highest standards for web design, user experience, best practices, scalability and speed. Responding to challenges by designing and developing solutions and building web applications aligned to customer's services. Translating solutions into code and working across many different APIs, third-party integrations and databases.

## WORK HISTORY

### 1. **Project Engineer, 11/2012 to 02/2020 (7 Years)**

Centre For Energy Research, United International University, Dhaka, Bangladesh

- Performed as "**Sr. Research Engineer cum Web Developer**"
- Design & developed IoT gadgets and devices with hardware, firmware, software and web application.
- Designed, implemented and monitored web applications for continuous improvement.
- Used programming capabilities in ***Embedded C, Python, PHP, SQL and JavaScript*** and other libraries as needed.
- Developed web applications, dashboards for interactive data visualization and demonstrating M2M communication.
- Researched new technologies, software packages and hardware products for use in web application projects.
- Experience in Embedded firmware development, testing & implementation
- Project management & Co-ordination

## SOFT SKILLS

- ❖ Agile workflow processes
- ❖ Web development projects
- ❖ Product Development
- ❖ Technical Support
- ❖ Problem Solving
- ❖ Project Management
- ❖ Web user interfaces

## HARD SKILLS

- ❖ Frontend Technology
  - ✓ HTML, CSS, JavaScript
  - ✓ Bootstrap, jQuery, Ajax
- ❖ Frontend Framework
  - ✓ Vue JS
  - ✓ React JS
- ❖ Backend Technology
  - ✓ PHP
  - ✓ Python
- ❖ Backend Framework
  - ✓ Laravel
  - ✓ Django
- ❖ Database: MySQL, PostgreSQL
- ❖ Version Control: Git
- ❖ Payment Gateway & SMS Integration
- ❖ Embedded System: Micro-controller, Raspberry Pi (Linux)
- ❖ Firmware Development for MCU
- ❖ Electronics Circuit & PCB Design

- Technical support, report and research proposal writing.

## 2. **Adjunct Faculty, 06/2015 to 08/2018 (3 Years)**

Dept. Of EEE, United International University, Dhaka, Bangladesh

- Designed and delivered class instruction to meet course competencies
- Examined and critiqued course material while including instructor-specific policies
- Developed creative and effective teaching methods for course content to capture student's attention
- Supervised more than 15 under grade Thesis/Project

## PROJECT EXPERIENCE

### ➤ **Web Application Development**

- ✓ Technology used:  
PHP, Vue JS, Bootstrap, Laravel, Python, Django  
MySQL, SSLcommerz, SMS gateway etc.

### ➤ ***Demand Response Enabled Smart Grid with centralized monitoring & control integrated with mobile prepayment.*** (2018-2020)

- ✓ Hardware Technology used:  
Arduino, Micro-Controller, M2M communication using IoT, MQTT protocol, GSM/GPRS, LoRaWAN/LPWAN
- ✓ Software Technology used:  
Embedded C/C++, Python, PHP, Laravel, MYSQL, SMS & payment Gateway integration, Big Data handling and device to server communication.

### ➤ ***Automatic Solar Irrigation system with remote monitoring and prepaid billing.*** (2015-2018)

- ✓ Hardware Technology used:  
Arduino, Micro-Controller, M2M communication using IoT, MQTT protocol, GSM/GPRS, Wireless RF/Zigbee Tech, Solar Energy.
- ✓ Software Technology used:  
Embedded C/C++, Python, PHP, Laravel, MYSQL, SMS & payment Gateway integration, Wireless Mesh networking, Big Data handling and device to server communication.

### ➤ ***Remote data logging system with web application for centralized monitoring of Battery Bank.*** (2013-2015)

- ✓ Hardware Technology used:  
Arduino, Micro-Controller, Wireless RF/Zigbee Tech.
- ✓ Software Technology used:  
Embedded C/C++, HTML, JavaScript, PHP, MySQL.

## AFFILIATIONS

- **Institute of Engineers (IEB)**  
**[Member: M -39360]**

## ACHIEVEMENT

- **Patent**  
Title: A system and method for smart irrigation system, BD-1006043, Patent# 324/2016, Dept. of Patents, Designs and Trademarks, Bangladesh]

## COURSE & TRAINING

- **Professional Web Development**  
Institute: Creative IT, Dhaka, BD
- **Design and Operation of Off-grid systems**  
Institute: SMA Solar Academy (Germany) & IDCOL (JV), Dhaka, BD
- **Circuit and Layout Design**  
Institute: VLSI Training Academy (VTA), United International University, Dhaka, BD


## EDUCATION

Examinations passed	School/College/University	Performance	Year of passing	Specialization
		CGPA/GPA		
M.Sc. in Computer Science and Engineering ( <b>MSCSE</b> )	United International University, Dhaka, Bangladesh	4.00/4.00	2017	Embedded System, Internet of Things (IoT) technology, Web Design and Development
B.Sc. in Electrical and Electronic Engineering ( <b>BSEEE</b> )	United International University, Dhaka, Bangladesh	3.29/4.00	2013	Renewable Energy, Electronics, Power System
H.S.C	Dhaka City College	4.50/5.00	2007	Science
S.S.C	Mohammudpur Govt High School	5.00/5.00	2005	Science

## AWARD & CERTIFICATE OF EXCELLENCE

SN	Award/Certificate	Awarded by	Award Type/Year	Field
1	Inter University Innovation Project Award ( <i>Power &amp; Energy Week - 2018</i> ) Project Name: <b>"Demand Response Enabled Smart Grid"</b>	Ministry of Power, Energy and Mineral Resources, Bangladesh (MPEMR)	<b><i>National Award, 2018</i></b>	Research, Innovation, & Development
2	Inter University Innovation Project Award ( <i>Power &amp; Energy Week - 2016</i> ) Project Name: <b>"Automatic solar PV irrigation system suitable for Bangladesh"</b>	Ministry of Power, Energy and Mineral Resources, Bangladesh (MPEMR)	<b><i>National Award, 2016</i></b>	Research, Innovation, & Development
3	Certificate of Appreciation & contribution to student community/club (UIUEEC)	Dept. of EEE, United International University	<b><i>Appreciation certificate, 2013</i></b>	Service, support & contribution to academic level student community
4	Certificate of Excellence/Achievement (University level project competition)	Dept. of EEE, United International University	<b><i>1<sup>st</sup> Place, in EEDay-2012</i></b>	University level project competition

I hereby declare that all of the information given above is true to the best of my sense and belief.



Signature:

Mahmud Ibrahim