

PRESENTING ALGONICS

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Technology Dimensions

Web App & Cloud Server

Browser-independent web applications hosted in Cloud infrastructure such as AWS.

Desktop & Mobile Application

Cross-platform mobile applications and desktop application built using modern UI technologies.

Artificial Intelligence (AI)

Image Analysis, Image Processing, Sound Analysis and Face recognition using Deep Learning frameworks.

Technology Dimensions (contd..)

IoT

Home and industrial automation using IoT applications. Expertise of customized SOC based IoT development using RTOS.

HMI

Cloud based remote monitoring, remote sensing and remote control applications with the ability to communicate with any hardware (Microcontrollers, PLCs, RTUs and so on).

Technology Dimensions (contd..)

Power Electronics

Proven DSP based Technologies for Grid tied inverter-converter, Bidirectional Inverter, Variable voltage-frequency source, MPPT Solar pump controller, SMPS Battery Charger, Three level state space vector controlled inverter.

Embedded Systems

Tested technology stack for Datalogger, Test benches, Control Systems, Alarm-Event Logger, 'Customized DCS. Accuracy Class 1 Energy meter.

Project Description	Web App/Cloud	Desktop/M.App	IoT/HMI	AI	Power Elect.	Embedded
Health Parameters Analyzer (USA)	✓	✓		✓		
Network Video Analyzer (Logistics)	✓		✓	✓		✓
People Counter (Khadims)	✓			✓		
Smart Entry Log	✓	✓		✓		
Health Savings Account (USA)	✓					
Finance Solutions (USA)	✓					
SOC based IoT with zeroconf and app (South Korea)		✓	✓			✓
Single Phase Energy Meter (SEB)						✓

Project Description	Web App/Cloud	Desktop/M.App	IoT/HMI	AI	Power Elect.	Embedded
Railways Signal Monitoring System (Indian Railways)	✓	✓	✓			
HMI for PLC (Rockwell automation)	✓		✓			✓
Induction Furnace Monitor (Megatherm)	✓		✓			✓
Cooling tower monitor (Paharpur Cooling Towers)	✓		✓			✓
Grid tied inverter/converter (IEST, Shibpur)			✓		✓	✓
IPS for Railways (Indian Railways)		✓			✓	✓

Project Description	Web App/Cloud	Desktop/M.App	IoT/HMI	AI	Power Elect.	Embedded
SMPS battery charger (Indian Railways)					✓	✓
Solid state 3 phase power source					✓	✓
Vector Controlled Inverter (BHAVINI, DoAE)					✓	✓
MPPT Solar pump controller					✓	✓
3 Level inverter (BHAVINI, DoAE)					✓	✓
Energy Meter test bench (IEST, Shibpur)		✓			✓	✓

Hardware Tools

Microchip PIC16 / PIC32 / DSP

Algonics is authorised design partner for Microchip Inc. the largest vendor for 8 bit and 16 bit microcontrollers and digital signal processors.

PCB Design

Expertise for SMD PCB designs for embedded and power applications.

ARM Cortex-A8

SoC design expertise

STM32

System design expertise using STM32

Embedded Software

Embedded C

Expertise to use different C compilers and ready embedded libraries for SPI, TCP/IP, UART, I2C, FAT, Smart Card, MODBUS, LCD, Graphics LCD.

RTOS

Expertise in FREERTOS and ThreadX.

Single Board Computers

Development in Raspberry Pi, Beaglebone, IMX and various other SBCs with Python.

Linux / Embedded Linux

Expertise to use Linux in embedded environment.

Backend Server Technologies

Nginx, WSGI, Python Django, Tornado & asyncio

Expertise in modern web and server technologies with Load Balancing in distributed architecture

Redis, Memcached

Use of Cache Servers for fast and readily-available backend.

MongoDB, MySQL, PostgreSQL

Experience in using SQL and No-SQL database solutions along with MongoDB to implement Big Data architecture.

WebSocket, Socket, HTTP, TLS

Implementation of Socket, WebSocket and HTTP over TLS for secure, modern and robust server side solutions.

Frontend Technologies

HTML 5, CSS 3, Bootstrap

Responsive web application development using modern HTML and CSS elements.

Angular, Javascript, Typescript

Use of the latest Angular framework to reduce server load and smooth user experience.

Ionic, Cordova, Xamarin

Cross-platform hybrid application development with all major browser and mobile platform support.