GABOR GUBICZA CV

MECHATRONICS MSC   2023 OCTOBER

gabor.gubicza@gmail.com   +36 30 714 0732
Residence: Budapest, HUN   +44 750 822 8102
DoB: 1987

in linkedin.com/in/gaborgubicza/

HARDWARE DEVELOPMENT MANAGER
TULIP INTERFACES   2023 FEB - 2023 SEP
INDUSTRY 4.0 SOLUTIONS, SMART MANUFACTURING, IIOT

HARDWARE DEVELOPMENT
- I organized and delivered a distributed Machine Monitoring solution from conceptual design to a 6 node prototype system. This was a cross-functional team project.
- I organized and delivered a low cost. Two alternative solutions were delivered for the Product Team to decide future product roadmap. The project was delivered with limited resources, on a short time-scale, it was manufactured by multiple suppliers independently in the EU and in the USA without a problem.
- I identified gaps in processes and tools for the Hardware Team, and improved
- Agile Project Management
- Interacted with Product Manager and I gave feedback to product roadmap plans
- Conducted interviews with prospective employees, and I carried out onboarding of new employees
- I used JIRA for a project management, Confluence for Knowledge base, GitHub for version control
- Defined Project Specifications

CROSS-FUNCTIONAL ACTIVITY
- I organized cross-functional team meetings between the Hardware and Support Teams to share knowledge and to optimize processes, such as the RMA policy.
- I carried out Corrective and Preventive Action (CAPA) both from an execution and planning standpoint
- I carried out Root Cause Analysis (RCA) of quality events, carrying out the investigation across multiple teams, and wrote the RCA report for transparency.

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CTO   2020-2023
ROBOTCENTER INNOVATIONS ZRT.
AUTONOMOUS MOBILE ROBOTICS FOR INTRALOGISTICS, INDUSTRY 4.0

PROJECT MANAGEMENT
- Automatic material transport from CNC machines to the Quality Assurance lab.
- Detection of pallets at the pick-up location and transporting them to a drop stack in the warehouse.
- I oversaw the development of a charger for forklift robots.
- Project management from first contact with the customer to establishing project specifications, on-site demo, business negotiations, robotic solution integration and deployment at OEM, Tier 1-2 companies including Automotive suppliers.

BUSINESS, PRODUCT MANAGEMENT
- I developed a ticketing system to track the progress of error and bug reports, integrated this system into employee time-sheets for project cost tracking.
- I advised Robot manufacturers on how to improve their HW/SW Products
- Established a company resource management system involving the time tracking of employees, database of AGVs and Mobile Robots, list of suppliers.
- I wrote job adverts, candidate registration system, interviewing, hiring, onboarding, writing Standard Operating Procedures and performance tracking.
- I gave talks and presentations at logistics and Industry 4.0 conferences
- I developed marketing material and case studies for Autonomous Mobile Robots

TECHNOLOGY CONSULTANT   2017-PRESENT
RUFUS SOLUTIONS LTD.   *INACTIVE*
RESEARCH & DEVELOPMENT, EMBEDDED

FOUNDER AND DIRECTOR
- I developed a specialized sensor for the measurement of corrosion rate for the Oil & Gas industry using **Autodesk Fusion360**. I organized manufacturing and deployed the solution to an oil refinery for a pilot project.   www.lucorr.com
- I developed a prototype Data Acqusition system to verify the proof of conept
- I oversaw the development of the next geneneration Integrated Data Acqusition for this corrosion measurement system by a subcontractor.
- I created 3D animations for Research visualization purposes, my main client was the Italian Institute of Technology.
- I designed custom electronics for battery experiments and data acquisitions using Altium Designer

RESEARCH ENGINEER   2012-2019
IMPERIAL COLLEGE LONDON,   MECH.ENG. NDT GROUP
NDT, ULTRASONIC SENSOR *AND* INTRUMENT DEVELOPMENT

HARDWARE DESIGNER

- **Electronics Hardware and Embedded development:**

Conceptual design	Production files	Reporting
Schematic design	Documentation	Deployment
SPICE simulation	Managing manufacturing	Batch production
PCB Design 4-6 LYR	Testing, Debugging	Organization

- Designed Multi PCB instruments with **ALTIUM DESIGNER**.
- Designed ULTRASONIC sensors both Piezo and EMAT types
- Developed MATLAB scripts, and modified existing ones for signal processing purposes. Interfaced instruments to **MATLAB**
- Designed a Data Acqusition System controllable from MATLAB via Serial port.
- Carried out experiments, I wrote test reports
- Mechanical Engineering design using **SolidWorks**. Designed several experimental rigs including a cylindrical scanner of magnetic fileds around a pipe.
- Strong Design for Manufacturing, Design for Testing skills

LABORATORY MANAGER

- Managed the Non-Destructive Testing group's daily experimental activities involving 30 PhD, EngD and PostDoc researchers. LEAN, 5S methodologies.
- Organized workplace safety, I was responsible for administrative background: EHS, MSDS, COSHH, Risk Assessments
- Planned a new laboratory floor layout, optimized the architect's plan to better suit the requirements of the NDT Group. Improved space useability by 20-30%
- Organized and managed the moving of the laboratory multiple times
- Created an organizational system that reduced searching for equipment, accessories and over 300 parts from 5-30 minutes to 30 seconds saving a lot of time.

RESEARCH ENGINEER SW. DEV   2012
CRABTREE *OF* GATESHEAD
METAL PRINTING MACHINE SIMULATION SOFTWARE DEVELOPMENT

I developed an engineering simulation software in Visual Basic in Visual Studio for the kinematic simulation of a rigid body's movement in a metal printing machine using a higher order polynomial solution. I developed both the GUI and the logic. This software was used to optimize the layout of the next generation metal printing machines.

2. EDUCATION

MECHATRONICS & ROBOTICS MSC. NEWCASTLE UNIVERSITY, UK 2011-2012
Graduated with distinction
Regularly gave tutorials in Control Theory, Signal Processing and Electronics

MECHATRONICS BSC. BUDAPEST UNIVERSITY OF TECHNOLOGY 2007-2011
Top of the class in Technical Drawing, CAD and IT
Theodore Karman Mechnical Engineering Stundent Competition winnig team member

3. COURSES

Mobile Industrial Robots	MiR Robotics	2017
Digital Signal Processing	EPFL - Coursera online	2014
Universal Robots	Robot Programming	2016
Controlling Mobile Robots	Georgia Tech - online	2015
Signal Processing	Nottingham University	2013
Industrial Vision Systems	National Instruments	2013
Industrial Vision Systems	Scorpion Vision	2012

4. PUBLICATIONS

Ultrasonic EMAT Phased Array: A feasibility study of surface crack detection.
Imperial College London: Julio Isla, Fred Cegla,
I designed, and built the experimental sensor the study was carried out with.

Shear waves with orthogonal polarisations for thickness measurement and crack detection
Imperial College London: Jaime Parra-Raad, Pouyan Khalili, Frederic Cegla
I designed, and built the experimental sensor the study was carried out with.

5. ADDITIONAL INFO
DRIVER'S LICENSE
~ 10-30.000+ km / year
~ 120.000 km total

LANGUAGE KNOWLEDGE

🇭🇺	Hungarian	Native
🇬🇧	English	Professional level
🇺🇸		Business negotiations
🇫🇷	French	Medium level

Good understanding of cultures, history

6. HOBBIES

PHOTOGRAPHY
Engineering, Technology, Design, Architecture, Nature
instagram.com/gabor.gubicza/

EDUCATIONAL VIDEOS
YOUTUBE.COM/GABORGUBICZA