

Johnathan J. Flaggs

Software & Automation

UCR, BCOE | BSME

Phone: 949.414.9545

Dear Team,

Please accept this letter and the accompanying resume as an expression of my interest in your open software position. My primary focus is high-tech development of robotic systems. Specifically, in software architecture, industrial automation, and technology consulting. I graduated from UC Riverside with a bachelor's in Mechanical Engineering. My concentration studies were completed at UC Davis in Control System Theory & Analysis. Ideally, I am seeking to contribute my knowledge and experience to a fast-paced company.

I have worked with industries including manufacturing, aerospace, medical, packaging, automotive, 3D printing, weld-tech, biotech, and digital storage. My contributions in these industries have been in robotics, industrial software development, machine vision, multi-fieldbus integration, User Interface (UI) development, source control, and much more. I am truly privileged to have the industry experience and exposure that I do; and I am honored to have worked together with some very strong teams.

I would like to reiterate my strong interest in your software position, and I look forward to an opportunity to discuss details in person. Please feel free to contact me by phone or by email if I may provide you with any additional information. Thank you for your time.

Sincerely,

Johnathan J. Flaggs

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Highly professional, competent, personable, and team oriented. Possesses strong problem-solving, organizational, and time management abilities. Professional references available upon request.

Education

University of California, Riverside (UCR)

Sep. 2010-Jun. 2014

- BSME, BCOE, Dept. of Mechanical Engineering

University of California, Davis (UCD)

Aug. 2013-Sep. 2013

- Controls Courses. Dept. of Mechanical and Aerospace Engineering

Professional Engineering Experience

Lead Software Architect at Essentium 3D

Jun. 2021-Present

Leading robotics software architecture and development for high-speed industrial 3D printers. Ensuring that our team builds a software core that is sufficiently robust, scalable, and maintainable to support the product line.

- **Mentoring** Jr. Engineers on approaching complex problems and upkeeping best coding standards
- **OOP** and heavy emphasis on robustness, scalability, maintainability, and patterns in C# .NET
- **Anticipate** and mitigate the impact of future design changes on the software layer
- **Design** of macro and micro software architectures which define the core product
- **Manage** and review source control on a per-commit basis

Sr. Robotics Software Engineer at Amada Miyachi

Nov. 2019-Apr. 2020

Developing software for Seam Sealing machines used primarily for medical and aerospace/defense customers. My contributions include:

- **Windows C# .NET** machine and vision process controls
- **Machine-Vision** Calibration to establish precision robot coordinates.
- **Integration** of various real time third-party measurement devices.
- **User Interface** Allowing users to fluidly interact with the multi-threaded application.s

Senior Robotics Software Engineer at Seagate Technology

Mar. 2017-Mar. 2019

Developing software for cutting edge processes in digital storage technology. My contributions include:

- **Windows C# .NET** proprietary machine and vision process controls
- **COGNEX** VisionPro API integration
- **Machine-Vision Calibration** to establish precision robot coordinates.
- **Motion Control** Kinematics, pick-n-place, multi-axis coordination, Quantum HSM framework.
- **User Interface** Allowing users to fluidly interact with the multi-threaded application.
- **Version Control** Using SVN, TFS and Agile/Scrum using Jira.

- **OOP** Heavy emphasis on encapsulation, inheritance, polymorphism, and robust design patterns.

Technical Toolset

Development Environments:

- | | | | | |
|-----------------------|--------------------|-----------------|--------------------|------------------|
| ▪ RSLogix/FactoryTalk | ▪ Beckhoff TwinCAT | ▪ MagneMotion | ▪ Fanuc Robotics | ▪ Fanuc iRVision |
| ▪ Cognex In-Sight | ▪ Baumer/VeriSens | ▪ Visual Studio | ▪ MATLAB /Simulink | ▪ SVN/GIT |
| ▪ Atmel Studio | ▪ CodeBlocks | ▪ Solidworks | ▪ Np++, Sublime | ▪ Brackets |

Development Languages:

- | | | |
|-------------------------|----------------------|-----------------------|
| ▪ PLC: ST, SFC, FBD, LL | ▪ Embedded: C/C++ | ▪ Web: HTML, CSS, JS |
| ▪ Windows: C#, BAT | ▪ Robotics: TP, TP++ | ▪ Prototyping: MATLAB |