Sounak Bhattacharya

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Summary

I am a software engineer with 7 years of experience in the field of Machine Vision/Computer Vision and Industrial Robotics. I am also a passionate coder who loves writing usable, maintainable and well-designed software. I like to work in challenging roles. I am an excellent team player with great communication skills. I also love to work independently and solve problems on my own when the opportunity arises.

Technical Expertise

Programming Languages Python, C, C++, Objective C, MATLAB

Domain Knowledge: Imaging, Machine/Computer Vision, Augmented Reality, Virtual Reality, Signal Processing, Machine Learning.

Software Tools: Vim, Microsoft Visual Studio Code, Pycharm, Git, Jenkins, LaTeX

Operating Systems: macOS, Ubuntu, Debian, Windows

Project Management Tools: Atlassian Jira

Expertise: Image Processing, Machine/Computer Vision, Robotics and Test Automation, Cross Platform Software Development, Data Science.

Libraries: OpenCV, Numpy, SciPy, Pandas, scikit-learn, Halcon

Work Experience

OptoFidelity Oy. (Imaging Engineer), October 2017 -

Automated Testing of AR/VR Head Mounted Displays

- Worked on machine vision problems related to testing Head Mounted Displays. This includes writing camera drivers, performing camera calibrations, designing camera alignment algorithms for Head Mounted Displays, designing and implementing algorithms for different analyses and implementing standard measurement methods e.g, IEC 63145-20-10

Display Inspection

- Worked on various projects related to software and imaging algorithms for display test automation.
- Worked for undisclosed client (Internal name: Sauna). This project involved porting and optimizing production ready image analysis algorithms, which was in MATLAB, to Objective-C. Delivered project on site.

IQC Software Development

- Worked for undisclosed client (Internal name: Sauna). This project involved developing an IQC (Internal Quality Control) tester for clients various different internal components. Delivered project on site.

Tampere University of Technology (Research Assistant), September 2014 - October 2017

3D Point Clouds

- Worked as a research assistant in the department of signal processing on projects which involved collaborations between Tampere University of Technology and Nokia Technologies. The work mainly involved working with 3D point clouds generated from Lidar data and feature extraction from these large scale 3D datasets.

Machine Learning: Surface Classification

- Worked on classification of glass and glass like surfaces.

Education

Tampere University of Technology (Master's degree), 2013 -

- Major in Signal Processing (Thesis pending). Minor in Information Technology.
- GPA: 4.2/5

West Bengal University of Technology (Bachelor's degree), 2008-2012

- Major in Computer Science
- Cumulative GPA: 7.39/10

Publications

- Bhattacharya S., Fan L., Babahajiani P., Gabbouj M. (2016) Global Scale Integral Volumes. In: Computer Vision – ECCV 2016 Workshops. ECCV 2016.

Patents

- Method and apparatus for processing signal data - US20160232420A1

Interests

Music, Cinema, Badminton, Reading, Running.

References

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