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SHASHANK MEWADA

CERTIFIED DATA SCIENCE PROFESSIONAL

PROFILE

Enthusiastic Senior Engineer with 8+ years of experience in Automotive, Healthcare and AEC domain. Self-Taught Developer, skilled in Computer-Aided Design (CAD) and Machine Learning. Looking to leverage deep learning skills for Autodesk.

- Led a team of 4 developers at AMP Engineering Design Ventures LLP
- Hands-on experience leveraging machine learning, deep learning to solve challenging business problems.

PATENT

Phatak et al. 2016, Method for Lossless Compression and Regeneration of Digital Design Data
- US10891759B2

TECHNOLOGIES USED

- AWS Lambda
- Docker
- C#
- ObjectARX
- Pytorch
- Github
- AutoCAD

SKILLS

- **Machine Learning**: Pytorch, NumPy, Pandas, Matplotlib, Scikit-learn, OpenCV
- **Tools & Technology**: AWS, Heroku, Github, Docker, DVC, JIRA, Eigen3, OpenGL, WandB
- **CAD**: AutoCAD, Meshmixer, CATIA, SolidWorks, FreeCAD
- **Programming**: Python, C++/C#, SQL, AutoLISP
- **OS**: Windows, Linux

WORK EXPERIENCE

AMP Engineering Design Ventures LLP

Senior Engineer
Mumbai, MH, India | Jul 2016 – Sept 2021 (5 yrs 3 months)

- Interacted with Client for business development and requirement gathering
- Managed the software development cycle, including research, development, testing, release for custom CAD application
- Implemented new technologies like Github, JIRA in the team and mentored junior developers

Graduate Engineer
Mumbai, MH, India | Jul 2013 – Jul 2016 (3 yrs 1 month)

- Managed complex projects from start to finish
- Translated requirements into polished, high-level designs
- Create functional and technical application documents

OFFICE PROJECTS

1. GD&T Recognizer and Auto Ballooning

- Team Size: 1 | Duration: 9 month
- Developed an plug-in for recognition of text and GD&T symbols (±, Ø) in technical documents (DWG, TIFF, PDF)
- Implemented the ML Ops pipeline as POC project.
- Reduced processing time by 80% per file

TECHNOLOGIES USED

- C++
- Python
- WinForms
- Eigen
- OpenGL
- JIRA

- C#
- ObjectARX
- AutoCAD
- Ms. Excel

- Invesalius
- Meshmixer
- FreeCAD

- CATIA
- AutoCAD

- Pytorch
- Github

- AWS Lambda
- Docker
- Pytorch
- Github

EDUCATION

University of Mumbai

Bachelor of Mechanical Engineering | Jun 2008 - May 2012

OFFICE PROJECTS (CONTD.)

2. Shockres Application

- Team Size: 5 | Duration: 9 month
- Led team in Developing an application for calculation of Vibration, Shock Response of multiple Mass System
- Converted existing code files from DOS to C++
- Developed ~70% of application including Calculator, Plots Visualizations and Mode shape Animations

3. AMP_Layouts / AMP_Autodimension

- Team Size: 1 | Duration: 6 month
- Worked on automating the existing manual process for site floorplans
- Developed plug-in to creating Layout, Dimensioning and Report in technical drawings.
- Improved the Project Lead time to 2 hour from 3 days

4. DICOM Processing

- Team Size: 1 | Duration: 11 month
- Converted CT / MRI files, generated 3D B-Rep models, meshes and visualization for Life critical cases in 2 day
- Provided better insights to Doctors for Surgery planning
- Processed 108 datasets and generated 45 B-Rep models

5. Tiresoft Plugin

- Team Size: 3 | Duration: 6 month
- Worked on automating the process of modelling parametric Tyre model
- Streamlined generic process for creating 3D Parametric CAD model from 2D drawing
- Reduced 3D modelling time to 3 hours from 15 days

PERSONAL PROJECTS

1. Point Cloud Part Segmentation

- Implemented Dynamic Graph CNN for Learning on Point Clouds (DGCNN) for Point Cloud Part Segmentation
- Trained the model on ShapeNet dataset
- Implemented as a POC project

2. Generative Adversarial Network (GAN)

- Collected 700+ Indian car images for the dataset
- Trained GAN model to generate Car images and deployed model on AWS Lambda / Heroku
- Implemented as a POC project

CERTIFICATION

Deep Learning Specialization, deeplearning.ai - Coursera

2SU44333JUZH | May 2020 - Aug 2020

Applied Data Science with Python, University of Michigan - Coursera

R74FYAN3SEMP | Jan 2020 - Jun 2020