MAYANK JAIN

AI Architect ◇ Author ◇ Tinkerer
https://mayankjain.co.in ◇ https://www.linkedin.com/in/mayankjain7/ ◇ https://github.com/mayank10j
House no. 135 First Floor , Sector 43 , Near Sector 43 Jain Mandir, Gurgaon, Haryana 122003
(+91) 9650419555 ◇ mayank10.j@gmail.com

BOOK PUBLICATION

- *Ensemble Learning for AI Developers*, https://www.springer.com/de/book/9781484259399

WORK EXPERIENCE

Sapient Consulting Pvt. Ltd. (PUBLICIS.SAPIENT) Aug 2014 - Present
Manager Technology *KeplerLab*

Role: Currently working as Manager Technology in Sapient India Experiments Lab: Kepler. Working as AI Architect delivering solutions using emerging technologies like Machine learning, Deep Learning NLP, Computer vision, AR, VR etc.

Some Projects:

· **Katna**: Developed an tool for automating common video keyframe extraction and Image Autocrop and image resize tasks, which helped save thousands of man hours across multiple projects.
Technologies: Python, Image-processing, video-keyframe-extraction , OpenCV, FFMPEG
https://github.com/keplerlab/katna

· **Alternat**: alternat is a collection of open-source toolsets with the ambition of lowering the barrier of adopting accessibility solutions. alternat helps to generate default intelligible alternative text for images in websites. Being used for solving website accessibility.
Technologies involved: Python, PyTorch, Azure and Google cloud api, Nodejs,Javascript,Docker
https://alternat.readthedocs.io/

· **Idea2Life**: Real time recognition of Web components from Templates and sketches to make responsive websites,Powered by Deep learning :
Technologies: Yolov2/Darknet, Tensorflow, Python, Nodejs,Javascript,Docker
https://github.com/keplerlab/idea2life

· **Interactive Mirror Installation (IMI)**: Deep Learning based Smart Retail assistance for physical store. Solving inventory visibility problem for physical retail store. Technologies: Yolov2/Darknet, Tensorflow/Keras,Faiss, Object Detection, Object classification, apparel classification, content based image retrieval, Python, Nodejs,Javascript,Docker
http://experiencesutra.com/projects/the-mirror-reimagined˙-a-smart-shopping-assistant-for-the-retail/

· **AI in Content Creation**: Use of ML/Deep learning for delivering efficiency to Sapient India content processes. Technologies used: NLP, Deep learning based text summarization, headline generation from article text, document tagging, topic modelling, content aware image cropping etc. Technologies: Tensorflow/Keras, Python, Nodejs,Javascript,Docker

· **Taj AR App**: Combining Deep learning with Augmented reality for interactive tour guide using iOS coreML and ARKit
Technologies: iOS CoreML and ARKit, Tensorflow,Darknet, Python, Swift
http://experiencesutra.com/experiments/reimagining-the-tour-guide/

· **Project CHAMELEON**: Using Deep neural networks using Torch for transfer of custom styles to an web app
Technologies: Torch,Lua,Nodejs, Style transfer, Javascript
http://experiencesutra.com/experiments/project-chameleon/

- **Neural Creativity, Hand drawn sketch Recognition**: Use of Deep convolutional neural Network to recognizes hand drawn sketches with more than 70 percent accuracy. Use of custom html5 game engine to bring your childhood imagination alive
  Technologies: Caffe,Python,OpenCV,C++,Nodejs,Javascript
  https://github.com/keplerlab/neuralCreativityServer
  https://www.youtube.com/watch?v=VajzcTbMobA
- **Autolysis, Combining Art with technology**: Collaboration project with renowned artist Asim waqif to use message of decay using technology. Installation uses CV techniques to bring about his ideas to life.
  Technologies: C++,OpenCV,Javascript
  https://www.youtube.com/watch?v=8NHU-L58fdw
- **ObjecTable, augmented everyday object experience**: One of the very first experience projects that were built out of Kepler Lab, Table Recognizes what is on top of it using simple webcam and changes it UI accordingly.
  Technologies: OpenCV,C++,Nodejs,Javascript
  http://awards.designforexperience.com/gallery/2014/experience-that-makes-a-difference/sapientnitro-0

Samsung Research Institute -Delhi (SISC) Feb 2013 - Aug 2014
Senior Software Engineer *Advanced Research Group*

- Point Cloud Processing Research Project (Aug 2013 - Aug 2014): Research project in Collaboration with IIT Delhi (Prof. Prem K Kalra ,Dr. Subodh Kumar and Dr. Subhashish Banerjee)
  Technologies: PCL, Eigen, OpenGL, OpenCV, C++
- Visual Attention Modelling System (March 2013 - Aug 2013): Detection of Persons attention while in front of Display using combination of face and eye tracking
  Technologies: OpenCV, C++

TCS (TCS Innovation Labs, Delhi) December 2009 - February 2013
Researcher *Computer vision and Robotics Group*

- Topological SLAM with visual Finger printing (Aug 2012 to Feb 2013): Building visual signature of places already seen to build topological SLAM, Use of Bag of words approach. Tools: OpenCV , C++ , ROS
- Face based Video Indexing (Early 2012): Building video indexing system based on face tracking. Tools: OpenCV , C++ , Qt
- Real Time Human Avatar Model Tracking System (2011): A Kinect, mounted in front of a body, was used to iteratively search and track the human body in each video frame. Image and depth data were manipulated and transformed to local co-ordinates of avatar model and used in real time tracking of human body in virtual world. Tools: OpenNI , OpenCV , Visual C++
- Browsing Behaviour Analysis in Retail Stores (Mid 2011): A Kinect mounted in a retail store was used to analyze the browsing behaviour of customers which includes Pick, Drop, Purchase of goods kept on shelves. Depth segmentation of 3D environment together with unsupervised clustering of human poses applied to AI core engine for classification of different activities. Tools: OpenCV , QT , C++
- Hand Raise and Face Motion detector (2010): Used as module in one of Virtual Reality product for detecting hand raise and face and shoulder motion detection of a person in front of webcam. Tools: OpenCV, QT

SPEAKER ROLES

- GIDS 2019: Primer to Ensemble Learning
  s *https://www.developermarch.com/developersummit/session.html?insert=AlokKumar1*
- Frequent speaker at Sapient Sapestart, new joiners induction programme at Publicis Sapient.

- Speaker and Organizer for Multiple webinars and Sessions for Deep learning, Machine learning inside Publicis Sapient.
- GIDS 2016: Speaker in Asia's Largest Developer conference *Great India Developer Summit 2016* on topic *Machine Learning for Everyday experiences.*
  https://web.archive.org/web/20160419172630/http://www.developermarch.com /developersummit/session.html?insert=MayankJain1

PATENTS

- *Method and Apparatus for Environmental profile generation at Samsung Research Delhi* ; http://www.google.com/patents/WO2016022008A1
- *A System and Method for Estimating Human Upper Body Pose from Single Image*; Application No. 1831/MUM/2011
- *A System and Method for Tracking Multiple Faces with Appearance Modes and Reasoning Process*; Application No. 1959/MUM/2011
- *A System and Method for Face based Video Indexing in a Video*; Application No. 2254/MUM/2011

PUBLICATIONS AND TALKS

- Nipun Pande, Mayank Jain, Dhawal Kapil and Prithwijit Guha, *The Video Face Book*, The 18th International Conference on Multi Media Modelling (MMM 2012), Klagenfurt (Austria), January 4-6, 2012
- Prithwijit Guha, Mayank Jain, Nipun Pande and Tavleen Oberoi, *Multiple Face Tracking with Appearance Modes and Reasoning*, The 15th International Conference on Image Processing, Computer Vision and Pattern Recognition (IPCV 2011), pp. 375-380, Las Vegas, July 18-21, 2011
- *Using blockchain technology for loyalty schemes*
  https://www.thehindubusinessline.com/catalyst/using-blockchain-technology-for-loyalty-schemes/article23700

INTERNSHIPS

National ICT Australia , IIIS Griffith University May 2008 - July 2008
Visiting Researcher *Smart Applications for Emergencies (SAFE) Group*

· Development of Heuristic for solving Boolean satisfiability problem solver using stochastic local search approaches.

Arcelor Mittal Steel plant,Kazakhstan May 2007 - June 2007
Intern *ArcelorMittal Temirtau*

· Hands on experience By Network Configuration and Monitoring of Temirtau City network.

TECHNICAL STRENGTHS

Computer Languages	C, C++ , Python , Javascript
Skills	Computer vision, Natural Language processing, Machine Learning/Deep Learning
Platforms	GNU/Linux, Windows Environments , Mac OS X
Tools	PyTorch, Tensorflow, Keras, Docker, OpenCV, Google Cloud, AWS, Git, NumPy/Scipy/Pandas/matplotlib, ROS, MS Visual Studio, Xcode, LaTeX

EDUCATION

Laxmi Niwas Mittal Institute of Information technology, Jaipur *2005-2009*
B.Tech. in Computer Science & Engineering
Overall CGPA: 7.73

Kendriya Vidyalaya Number 1 Jaipur, CBSE Board *2003-2004*
AISSCE 2004 (XII) in Science Maths
Overall Percentage: 79%

Kendriya Vidyalaya Number 1 Jaipur, CBSE Board *2001-2002*
AISSE 2002 (X)
Overall Percentage: 70.2%

PERSONAL DETAILS

Date of Birth	12th May 1987
Sex	Male
Nationality	Indian
Marital status	Married
Languages Known	English , Hindi
Interests	Reading ,Writing , Programming , Current affairs, Economics