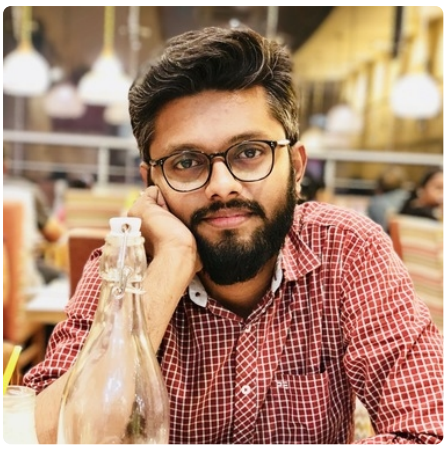

Hemen Ashodia

Machine Learning Developer in Ahmedabad, Gujarat, India • hemen@htree.plus

I Have 10+ years of experience in full-stack development and machine learning, worked on hundreds of machine learning projects. I expertise in artificial neural networks, deep learning, reinforcement learning, generative adversarial networks. I also haved worked for company that was later acquired by Intel (mainly for their machine learning development) and worked as lead machine learning scientist at top fortune 50 companies like Johnson & Johnson Data Scientce new York.

Deep Neural Networks | Data Structures | Deep Learning | Python | Kubernetes | Java | h+Tree | NLP | OpenStack | Adam Optimizer | JavaScript | PHP | C | C++ | MySQL

PORTFOLIO

F(x) Data Labs PVT LTD
TensorFlow, Python, Keras, Machine Learning, Neural Networks, Data Structures...

Johnson & Johnson - Data Science
TensorFlow, Python, Pandas, NumPy, Linear Regression, Logistic Regression...

Ever AI
TensorFlow, KDTree, Hadoop, C/C++, Python

EXPERIENCE

C++, 10 years

C, 10 years

Java, 7 years

Python, 7 years

Deep Learning, 6 years

Deep Neural Networks, 6 years

TensorFlow, 4 years

Laravel, 3 years

THE MOST AMAZING...

Invented the fastest data structure algorithm, h+Tree which was 300% faster than b+Tree— saving 40%-to-66% in energy/server cost.

EMPLOYMENT

Chief Scientist and Software Engineer
2015 - PRESENT

F(x) Data Labs PVT LTD

- Invented the fastest data retrieval algorithm h+Tree that had an up to 300% speed increase than the conventional b+tree—this was particularly useful for all the popular databases like MySQL, PostgreSQL, MongoDB, SQLite, etc. The system was translated into several languages including C/C++, Python, and Scala.
- Created a full-stack public cloud on the latest version of OpenStack with an infrastructure as a service, database as a service, and object storage service. The system was built with OpenStack, Python, Ansible Notebooks, Ubuntu 16.04, and Python unit tests.
- Developed an artificial intelligence based enterprise resource planning (ERP) system for a 60-year-old real estate company with help of TensorFlow, a deep neural network, Laravel, Angular 4, Frappe, Python, MySQL, Ubuntu 16.0, and unit tests.
- Built a loan prediction default system with an accuracy of 99.4% with help of TensorFlow, Python, and R. It also predicted the loan default amount with a 96.3% accuracy.
- Implemented baby-cry detection with sound classification along with support vector machines (SVM) on Raspberry Pi to notify parents when a baby is crying.
- Developed video classification with a deep neural network to detect different human gestures from the video as small clips; used an artificial neural network, Caffe 2.0, C/C++, convolutional neural network, and Nvidia CUDA.
- Created a hospital-operation-room scheduler with artificial neural networks, Python, Laravel, Angular 4, CSS3, Vagrant, and unit tests.
- Enabled video style transfers for 3D videos for an artificial neural network with PyTorch, Google Cloud, CUDA, and more.
- Created 3D face mesh model from a single mobile camera based selfie with an accuracy of more than 98%. The project was built using PyTorch (a convolutional neural network, and CUDA).
- Implemented a movie review sentiment analysis with a convolutional neural network, TensorFlow, Python, and Python Notebooks.
- Developed a Lego bricks identification system to identify using TensorFlow with Go language and OpenCV.
- Implemented cryptocurrency market prediction along with historical data of online trading using TensorFlow on the Go language.

Technologies: TensorFlow, Python, Keras, Machine Learning, Neural Networks, Data Structures, Java, C/C++, PHP, Laravel 5, AngularJS, Angular 4, Bootstrap 3/4, MySQL, Go

Lead Data Scientist and Machine Learning Expert
2018 - 2018

Johnson & Johnson - Data Science

- Led and created data pipelines, which used millions of data points, for the identification of the best strategies to increase the effectiveness of professional educational events (specifically those events for medical device training all across the USA and elsewhere).
- Verified the work done by another data science company in the domain of medical professional education events.
- Worked directly with principle scientists of Johnson and Johnson - Data Science in New York.

Technologies: TensorFlow, Python, Pandas, NumPy, Linear Regression, Logistic Regression, Data Modeling, Cleaning, Jupyter Notebooks, Artificial Intelligence,

Lead Go Developer
2018 - 2018

Loom Network

- Built a Karma system for a decentralized crypto platform.
- Implemented a Sparse Merkle Tree.
- Developed a rate limiter for access control.
- Designed with Oracle for a Loomchain platform.

Technologies: Go, Solidity, LevelDB, Tendermint, Ethereum, JavaScript, Python, Raft Consensus Algorithm

Freelance TensorFlow Expert
2018 - 2018

Ever AI (via Toptal)

- Worked for Ever AI, the world's leading face recognition technology company that raised a total of 30 million in funding. It implements face recognition at a planetary scale of 12 billion images.
- Was tasked to invent the fastest algorithm to identify the correct face using machine learning.
- Developed the fastest algorithm in less than half the time with a 99.81% accuracy.

Technologies: TensorFlow, KDTree, Hadoop, C/C++, Python, Kmeans Cluster

Chief Scientist and Chief Technology Officer
2015 - 2015

Zidisha, Inc.

- Built new features and functionalities for a website with Laravel, Propel Bootstrap, Beanstalk servers and Ubuntu Trusty64.
- Supported the entire back-end code and reviewed the front-end code that was done by other team members for further verification.
- Implemented automatic language translation for each new user.
- Worked as a remote engineer for a US-based company.

Technologies: Laravel, Propel, Vagrant, CSS3, Bootstrap, Sass, GitHub, Ubuntu Trusty64, PayPal, Stripe

Founder and Lead Back-end Developer
2013 - 2015

Remarkin

- Developed a video engagement prediction system with artificial neural networks, OpenCV, and Scala.
- Constructed an interactive, gamification-based course for C/C++ with PHP, MN Framework, jQuery, JavaScript, and CSS3.
- Built a remote interactive C/C++ compiler with a TinyC compile and a GNU compiler.

Technologies: PHP, MN Framework, jQuery, Bootstrap, Responsive Design, MySQL, Design Patterns, C/C++, Windows Azure, Windows Service 2012, OpenCV, Artificial Neural Networks, Scala, Gamification

Project Trainer
2012 - 2013

Aspire Institute

- Trained for a year for more than 150 students for their final year projects in the college.
- Coached for C/C++ language programming skills.

Technologies: PHP, Java, MySQL, CSS, CSS3, HTML5, HTML, C, Advance C, C++, Object-oriented Programming

Machine Learning and Web Developer
2012 - 2013

Cruxbot

- Built a realtime website summarization tool with Java on top of Google App Engine.
- Built a Parallax website that represented artificial intelligence based company.
- Helped build an interface for the text summarization browser extension CruxLight.

Technologies: Java, OpenNLP, Google App Engine, Parallax Websites, jQuery, CSS3, HTML, JavaScript, PHP

Web Developer
2011 - 2012

Amitech

- Developed Picinchat.com and enabled it to create mega emoticons from user uploaded images. These emoticons were created using PHP, the Facebook API, and the GD library.
- Created a Ridje browser extension to allow clients to customize any web page that they visit and keep changes/customization persistent. This was built using JavaScript and the Chome extension developer toolkit.

Technologies: PHP, Facebook Auth API, GD Library, CSS3, HTML5, JavaScript, jQuery, Chrome Extension

Freelance Developer
2010 - 2011

Self-employed

- Created a real-time chatting feature for a site with a real-time feed of a user typing on the other side.
- Developed a Flash-based cricket single player vs computer game.
- Worked on a tic-tac-toe human vs computer machine.
- Built a live video-streaming website with a screenshot for video scroll navigation.

Technologies: C/C++, Flash, PHP, MySQL, HTML, CSS, jQuery, AJAX, JavaScript, MS Access, Node.js

EXPERIENCE

F(x) Data Cloud (Development)

A fully functional public cloud service based on the latest version of OpenStack. It provides an infrastructure as a service, database as a service, object as a service, network as a service, and storage as a service.

Invented h+Tree (Development)

This is a 300% faster data structure algorithm for data retrieval—saving cloud costs by 40-to-66 percent.

Zidisha, Inc. (Development)

https://zidisha.org/

A Y-Combinator-based peer-to-peer microfinance startup based on Laravel—focusing on providing zero-interest loans in developing countries.

Cruxbot (Development)

http://www.cruxbot.com/

Cruxbot processes a vast amount of information to make complex and subtle logical connections, breaking down the barrier between people and machines.

BAKERI ERP | Artificial Intelligence Based ERP (Development)

An ERP for a real estate firm to predict the most optimal contractors and manage the entire workflow for the firm.

Artudata (Development)

https://dashboard.artudata.com/

A machine learning-based system to predict if a client will pay or not; all done with the RESTful API. This helps the client increase their conversion rate and increase revenue and save on costs.

I built the dashboard for the company which provides marketing and advertisement management and analytics with Google AdWords APIs and the Facebook app. It provides a fully automated marketing experience managed with machine learning.

Korebin (Development)

A hospital operating room scheduler based on machine learning.

Ever.ai | Face Recognition at a Planetary Scale (Development)

https://ever.ai/

I invented the fastest search algorithm to find the nearest embedding for the face recognition. I also reduced the complexity from n to log(n) for search.

Loom Network (Development)

https://loomx.io/

I built a dynamic Karma system for a leading Blockchain-based platform for the Loom network and implemented a Space Merkle Tree.

SKILLS

Languages

R, C++, C, CSS3, HTML5, Less, SCSS, Python, PHP, JavaScript, Java, Solidity, Go

Frameworks

Laravel 5, Caffe, Nova, Selenium, Bootstrap 4, Bootstrap 3, Angular, AngularJS, Laravel

Libraries/APIs

OpenNLP, NLTK, NumPy, OpenCV, Python API Bindings for OpenStack, Cinder, Laravel Elixir, PhantomJS, Three.js, jQuery, Keras, TensorFlow, FFmpeg, Propel, Stripe, PyTorch

Tools

Subversion (SVN), Gulp.js, Git, TensorBoard, Stanford CoreNLP, MATLAB, VirtualBox, Shell, Composer, Scilab, Mathematica, Beanstalk, Microsoft Unit Tests

Paradigms

Design Thinking, Imperative Programming, Functional Programming, Test-driven Development (TDD), Agile Software Development, Unit Testing

Platforms

OpenStack, Arduino, CUDA

Storage

MySQL Clustering, PostgreSQL, Oracle 10g, Redis, MySQL, MariaDB, MongoDB,

Other

Oracle VM VirtualBox, Deep Learning, WordNet, Standardization, Adam Optimization Algorithm, Capsule Networks, Generative Adversarial Networks (GANs), Deep Neural Networks, OpenStack Swift, HEAT, Ceilometers, Neutron, Virtualization, Routing, Azure Virtual Networks, Networks, User Experience (UX), Macros, Bootstrap UI, Convolutional Neural Networks, Natural Language Processing (NLP), PayPal, Trusty64

EDUCATION

Certificate in Design Thinking (Venture Studio for Credit) 2013 - 2015
Venture Studio with Stanford University - Online

Bachelor of Engineering degree in Information Technology 2010 - 2014
Lalbhai Dalpatbhai College of Engineering - Ahmedabad, India

CERTIFICATIONS

Leadership and Excellence Award FEBRUARY 2015 - PRESENT
Gujarat Technological University, Ahmedabad, Gujarat, India

DECLARATION

I do hereby declare that all the above information furnished by me are correct to the best of my knowledge.

- Hemen Ashodia