

Pankaj Bhambhani

UMass Amherst Master's CS, 3+ years Work Ex. Seeking Full-Time Roles - Machine Learning, Software Development

✉ pbhambhani@cs.umass.edu ☎ 413-230-6252 🌐 [pankajb64.github.io](https://github.com/pankajb64) in [pankajb64](#) 🔄 [pankajb64](#) 📍 Amherst, MA

EDUCATION

University of Massachusetts Amherst MS - Computer Science (GPA – 3.95) Expected Graduation – May 2018

Coursework – Machine Learning, Natural Language Processing, Artificial Intelligence, Reinforcement Learning, Systems

Dhirubhai Ambani Institute of Info & Comm Tech. Bachelor of Technology 2009-2013

Coursework: Algorithms, Data Structures, Networks, Databases, Operating Systems, Cryptography, Natural Computing

SKILLS

Languages – Java Python, C++, Bash, SQL

Frameworks – Spring, Tensorflow, Keras, Docker, AngularJS, Android

Tools – MySQL, AWS, MATLAB, Redis, Hadoop, Git

PROFESSIONAL EXPERIENCE

Play Games 24x7 Pvt. Ltd. – Software Engineer (Full-Stack) for RummyCircle Jul 2013 - May 2016

- Scaled and optimized distributed in-memory caches using **Ehcache** and **Redis**, also optimized gameplay bot.
- Built RESTful Web Services using **Spring**, Strengthened application security using **Spring-Security**.
- **Technologies** – Java, Spring, Redis, MySQL, Bash, Test-NG

Machine Learning for Data Science (MLDS) Lab – Software Developer for Dark Ecology Project May 2017 - Present

- Scaled the existing learning models to run on large volumes of data, which identify patterns in bird migrations.
- Plans include Analyzing the results and Generating plots to better understand bird behavior during migration.
- **Technologies** – MATLAB, AWS S3, AWS Batch, Docker, Python. See darkecology.cs.umass.edu

K-Desktop Environment (KDE) – Software Developer for Choqok May - August 2012

- Integrated Facebook support for users of KDE's desktop client, Choqok.
- Built a base library which allows users to create, view, like and comment on posts
- **Technologies** – Qt, C++. See github.com/pankajb64/choqok-facebook

RESEARCH EXPERIENCE

Detecting Swallow Roosts using Deep Learning – Research Assistant with MLDS Lab Sep 2017 - Present

- Formulating Faster-R-CNN based models to detect and locate swallow roosts in weather image data.
- Plans include Building a benchmark data set, fine-tuning models, and Evaluating for large scale data using AWS.
- **Technologies** – MATLAB, Python, AWS S3. See darkecology.cs.umass.edu

ACADEMIC PROJECTS

Image Captioning with Visual Attention – Machine Learning Course Project Oct - Dec 2016

- Analyzed an LSTM-based deep learning model to generate captions given an unseen image.
- Produced visualizations showing what the model is looking at while predicting a word in the caption.
- **Technologies** – Keras, Theano, Python. See github.com/pankajb64/image_caption_using_attention

Conservative Garbage Collector (GC) – Systems Course Project. **Technologies** – C++ March 2017

- Developed a prototype model that tracks the memory allocated and collects unreferenced objects.
- Tested it on real world applications such as **Firefox** and **vim** with no crashes or performance degradations.

Memory-based Caching – Systems Course Project. **Technologies** – C++, Python April 2017

- Implemented a multithreaded server based on **memcached** protocol to store objects in memory instead of database.
- Tried LRU and randomized eviction policies and tested with object sizes of **upto 2 GB** with high performance.

Pictionary with Jibo – HackUMass 2016 Oct 2016

- Trained Jibo a social robot, to play Pictionary using Tensorflow's Image Recognition models and simple line-drawing images, with over 80% accuracy for common objects such as house, chair, etc.
- **Technologies** – TensorFlow, Jibo SDK, OpenCV, Python. See github.com/pankajb64/jibo-pictionary