Pankaj Bhambhani

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

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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, Blockchains

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, JavaScript
Frameworks – Spring, Keras, Docker, AngularJS, Android **Tools** – MySQL, AWS, MATLAB, Redis, 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

- Machine-Learning based tools to help biologists locate swallow roosts in weather image data.
- Contributions include building a benchmark data set and evaluation on large scale data using AWS.
- **Technologies – MATLAB, Python, AWS S3.** See **darkecology.cs.umass.edu**

ACADEMIC PROJECTS

Evaluate Website Fingerprinting Attacks on the Tor Network – SPIN (Secure, Private Internet) Lab Oct - Dec 2016

- Built a ConvNet to predict which websites were browsed on Tor from their network traces, with over 90% accuracy.
- **Technologies – Keras, Numpy, Python, C++, Bash, Docker.** See **github.com/pankajb64/wf_attacks_evaluation**

Neural Image Caption Generator – Machine Learning Course Project Oct - Dec 2016

- Analyzed a state-of-the-art LSTM model which generate captions for images; and visualized its inner workings.
- **Technologies – Keras, 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 a social robot to play Pictionary from simple line-drawing images with over 80% accuracy for common objects.
- **Technologies – TensorFlow, Jibo SDK, OpenCV, Python.** See **github.com/pankajb64/jibo-pictionary**