Puneet Gill

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EDUCATION

UNIVERSITY OF WATERLOO
B.A.Sc. IN ELECTRICAL ENGINEERING
Expected June 2018

COURSEWORK

Cooperative and Adaptive Algorithms
Computer Networks
Computer Security
Compilers
Algorithm Design and Analysis
Embedded Microprocessor Systems
Algorithms and Data Structures
Digital Computers
Communication Theory
Analog Control Systems

ASSIGNMENTS

PEER-TO-PEER CONTENT MANAGEMENT SYSTEM
Supported functions of adding and removal of peers and content to the peers while maintaining a load balancing condition.

MUSIC PLAYER
Implemented a music player on **Altera DE2 FPGA** to play .wav files in different play modes (half speed, double speed, reverse, one channel delayed).

COMPUTER SECURITY LABS
Implemented various software vulnerability attacks.

A.I. ALGORITHMS
Implemented genetic algorithm, ant colony optimization and particle swarm optimization for designing a PID controller, TSP & function optimization.

SKILLS

PROGRAMMING
Java • C/C++ • Python • Go
Shell • JavaScript • Clojure
Matlab • ARM Assembly • VHDL
Ruby • LaTeX • CSS

TECHNOLOGIES
Docker • Kubernetes • git • gdb
Redis • PostgreSQL

LINKS

LINKEDIN:
ca.linkedin.com/in/puneetgill05
GITHUB:
github.com/puneetgill05/

EXPERIENCE

AMAZON INC. | SDE INTERN — Sep – Dec 2016 | Seattle
Java, Spring, Ruby, DynamoDB

- Worked on implementing a customer specific pricing for Amazon business customers.
- Wrote a recommender strategy service to display the widgets on page load within **250 ms** based on customer's location, purchase history and industry.
- Ran experiments for amazon business suggestions and multiscoping for products.

WEMESH | BACKEND ENGINEER INTERN — Sep – Dec 2015 | Waterloo
Node.js, Go, Apache Kafka, Kubernetes, Zookeeper, Docker

- Worked on implementing a custom messaging protocol to support large number of users.
- Wrote a library for sending GCM XMPP notifications in Java with a throughput of **30K messages/second**.
- Wrote a bot in Go to test the scalability of the app by supporting all features including VoIP, chat and voting.
- Reduced latency in user join times due to large number of users in a single chat from **8 seconds** to **30 milli seconds**.

WEMESH | ANDROID DEVELOPER INTERN — May – Aug 2015 | Waterloo
Android, Retrofit, C, Python, Exoplayer

- Worked in the Android team to make a video syncing app (**100K** - **500K** downloads).
- Worked on building core features of the app: sync engine, video voting & VoIP client.
- Worked on echo cancellation during VoIP to improve VoIP quality across devices.

PIVOTAL LABS | AGILE ENGINEER — Sep – Dec 2014 | Toronto
Android, Robolectric, AngularJS, jQuery, Java, MongoDB

- Worked on the multi user chat and indoor mapping for Carnival Cruise android app (**100K** -**500K** downloads) and used **Robolectric** for tests.
- Worked on the server side for an internal app for tracking employees (400) in the office using iBeacons.
- Created a web app for allocating seats to different projects for all Pivotal Labs offices.

CITIGROUP INC. | SOFTWARE DEVELOPER INTERN — Jan – Apr 2014 | Toronto
Java Spring Framework, AVS, Openlink, OracleDB

- Developed an automated system to update the Commodities database with the portfolio information from the accounting database in real time.
- Developed commodities financial control downstream feeds. Optimized the commodities end of day sequences to achieve **30%** runtime performance gains.

PROJECTS

MACHINE LEARNING ALGORITHMS TO DETECT HANDWRITING | PYTHON
Implemented and compared various machine learning algorithms such as back-propagation, stochastic gradient descent and convoluted neural networks for detecting handwriting

DIFFERENT TECHNIQUES TO BLUR AND DEBLUR AN IMAGE | MATLAB
Implemented blurring and deblurring techniques to blur and deblur an image. Used mean and gaussian filters to blur and inverse and wiener filters to deblur.