# Sayak Biswas

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# **EDUCATION**

### UNIVERSITY OF FLORIDA

MS IN COMPUTER SCIENCE Dec 2017 | Gainesville, FL GPA: 3.92 / 4.0

#### WEST BENGAL UNI. OF TECH.

BTECH IN COMPUTER SCIENCE July 2011 | Kolkata, India GPA: 8.81 / 10.0

# LINKS

Github:// sayakbiswas LinkedIn:// sayakbiswas

# **COURSEWORK**

#### **GRADUATE**

Analysis of Algorithms
Advanced Data Structures
Cloud Computing & Storage
Dialog Systems & Natural Language (NLP)
Pattern Recognition
Statistics
Computer Graphics
Computer Graphics for Simulation
Virtual Reality

#### **UNDERGRADUATE**

Database Management Systems Operating Systems Artificial Intelligence Web Technologies

#### **INDEPENDENT**

Machine Learning(Coursera)

# SKILLS

# **LANGUAGES**

Java(proficient) • JavaScript(proficient) C/C++(prior experience) • C#(basic) Python(basic) • R(basic) • HTML5\CSS3

#### **TECHNOLOGIES**

JEE • IBM WebSphere Portal • jQuery jQuery Mobile • React.js • Semantic UI Bootstrap • Highcharts.js • Oracle • AWS TensorFlow • OpenGL • Unity3D Unreal • SOFA Framework • Google VR SDK

# **EXPERIENCE**

# TATA CONSULTANCY SERVICES LTD. | SOFTWARE ENGINEER

Mar 2012 - Dec 2015 | Hyderbad, India

- Implemented an enhanced predictive analytics model for underwriters in a multination Insurance company which helped in automatically analyzing and predicting the risk presented by applicants.
- Developed a web based workflow automation and management tool using IBM WebSphere Portal, Java/JEE and SOAP web-services for a multinational Insurance company.
- Implemented multiple enhancements for the above application including developing a correspondence generation module leveraging EMC Document Sciences xPression.
- Designed and developed a hybrid mobile dashboard app to provide visual represenations of various day-to-day metrics of all applications used in the enterprise. Implemented both HTML5 based front-end and the RESTful back-end using JEE Servlets, Jersey API and Oracle SQL.

## **PROJECTS**

# **ASSISTIVE JOB SEARCH** | Natural Language Dialog System C# | Microsoft LUIS | MongoDB

• Developed a spoken dialog system to aid the visually impaired computer users to search and retrieve job information from the web using speech.

#### **DEEPCHAT** | CHATBOT

Python | TensorFlow | AWS

• Implemented a deep learning based chatbot using the sequence-to-sequence framework for RNN/LSTM neural network models as described in "A Neural Conversational Model" (Vinyals et. al.).

### **INSIDE PAINTINGS VR** | VR EXPERIENCE

C# | Unity3D

- Developed an Android/Google Cardboard app that explores how to enhance a virtual art museum by allowing users to experience and interact with a couple of Vincent Van Gogh's work in 3D.
- Explores the artist's vision using a first-person narrative device.

#### **SURFLAB TIPS** | Interactive Surgical Simulation

C++ | OpenGL | SOFA | Blender | CMUSphinx

- Developed a multithreaded plugin for the SOFA Framework which enables user interaction with 3D scenes using voice commands.
- Implmented the PN-Triangles and PN-Quads algorithms in OpenGL 4 tessellation shaders to improve rendering of various organs in the scenes. Also, implemented a rudimentary wetness shader for the internal organs.

# ADDITIONAL EXPERIENCE & AWARDS

- Sun Certified Java Programmer and Oracle Certified Web Component Developer
- Certified competent leader from Toastmasters International
- Part of Java and Mobile development Centers of Excellence in TCS