

# 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

## CERTIFICATIONS

- Sun Certified Java Programmer and Oracle Certified Web Component Developer

## EXPERIENCE

### MATHWORKS | INTERN

May 2017 - Aug 2017 | Novi, MI

- Worked on developing 3D visualization features for MATLAB/Simulink.
- Developed a GUI tool that allows users to easily define shapes and surface profiles of road tracks in MATLAB and an Unreal engine plugin to visualize the same. Used MATLAB and Unreal C++ API.
- Developed programmable scene components for a simulation sequence to be controlled via Simulink.

### TATA CONSULTANCY SERVICES LTD. | SOFTWARE ENGINEER

Mar 2012 - Dec 2015 | Hyderabad, India

- 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 representations 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 works in 3D while following a first person narrative.

### 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.
- Implemented the PN-Triangles and PN-Quads algorithms in OpenGL 4 tessellation shaders to improve rendering of various organs in the scenes.
- Implemented a rudimentary wetness shader for the internal organs.