Bharat **Singh**

B.Tech - M.Tech Dual Degree · Information and Communication Technology and Cognitive Neuroscience (Minor)

University of Rajasthan Jaipur

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Education

Centre for Converging Technologies, University of Rajasthan *Jaipur, India*
B.Tech - M.Tech Dual Degree, Information and Communication Technology
and Minor in Cognitive Neuroscience *2015 - 2020*
- Rank in Top 3. Cumulative Performance Index / **CGPA: 4.6/6.0**

Work Experience

Celebal Tech *Jaipur, India*
Data Science Intern *Feb. 2019 - Present*
- Developed Face Detection model for auto Attendance in company with 93 percent accuracy as Use-case and Deployed using Azure Machine learning services (utilized DataBricks, Transfer learning, Azure ML services, Azure Blob).
- Programmed a Demand, Supply Forecaster and auto Supply-chain dashboard generator (PowerBI) as Supply and Operation Planning Usecase (utilized widget in DataBricks, Multivariate ARIMA, PowerBI, Azure Blob).
- Currently Working on Cognitive Automation for Supply Chain as Usecase.

DBT-BIF, Department of Biotechnology, Govt. of India *University of Rajasthan, Jaipur*
Research Intern, under Sumita Kachhwaha *July. 2018 - Jan. 2019*
- Worked on Spark, AWS services, Galaxy to Annotate, Align and Querying Genomic Databases, features requested by industry in Bio-informatics.
- Created a spark cluster and web enabled tool for finding unique DNA fragment. project includes phylogeny tree of life creation. it involves use of graph data structure, MongoDB, Searching, allignments, kmer manipulations and bioinformatics for client-servers
- Designed Algorithms for Extraction, Preprocessing, Sequencing, Searching of Genomic Database and Networking for phylogeny using Python, shell scripting. Used Machine learning and statistical inference for data analysis, classification and prediction in Genomic database

CCT Department, University of Rajasthan *Jaipur, India*
Full Stack Developer, under Prof. Abhilasha Dangi *Feb. 2017 - May. 2017*
- Worked on a scalable microservice based web application with an extensive technology stack.
- Designed and developed critical backend features while ensuring type-safety.
- Developed and deployed the complete functionality in institution
- Adjudged as one of the best project, while being a freshman.

Projects

Biosensor-Python *DBT-BIF Jaipur*
Research Project, Prof. Sumita Kachhwaha *July. 2018 - Sept. 2018*
- Created a web enabled tool for finding unique DNA fragment that also draw phylogeny of life.
- Designed a module in python for Extraction, Parsing, Pre-processing, Sequencing, Searching of Genomic Database and Networking for phylogeny of life.
- Used Machine learning and statistical inference for classification and prediction in Genomic database

Senior Students Placement Cell *University of Rajasthan, Jaipur*
Course Project, Prof. Abhilasha Dangi *Feb. 2017 - May. 2017*
- Conceptualized new web 2.0 based IT services such as Interest Group Discussion Forums, Senior alumni Information and contacts, Campus Wiki, Project Database
- Allow easier collaboration, better information organization and formalizing undocumented technical.
- Designed intuitive user interfaces and work-flows for these services and customization then finally deploy these services in the institute

Thought Reading Device: Predicting Text by EEG signals (BCI)
IIT Guwahati

RESEARCH PROJECT, TEAM OF 2 MEMBERS
Nov. 2016 - March. 2017
- Designed Computational model to infer psychological state of human brain with one colleague.
- used BrainIAK software that allows for decoding digital brain data to reveal how neural activity give rises to learning, memory and other cognitive function.
- Used viterbi force alignment and hidden markov model for mapping phone sequences to word.

Pneumonia Detection: Deep learning
CCT Jaipur

LEADER, TEAM SUDOHACK PROJECT
Sep. 2018 - Nov. 2018
- Build an algorithm that shows good confidence interval in detecting pneumonia and Automatically locate lung opacities on chest radiographs and medical images.
- Used TensorFow, CNN model: DenseNet169 for transfer learning, and predict lung opacity by loading models.
- Finished in top 10 teams from all over India at LNMHacks 3.0.

Conferences/Workshops & Certificates

2017	**National Symposium on Cognitive Science**, Poster:Thought Reading Device	*IIT Guwahati*
2016	**High Performance Computing**, Techfest IIT Bombay	*IIT Bombay*
2018	**Annual Conference of Cognitive Science**, Participant	*IIT Guwahati*
2019	**Young Statisticians Meet:Data Science in action**, Attending	*ISI Kolkata*
2018	**Tools of Research**, Oral Presentation	*CCT Jaipur*
2018	**Microsoft Professional Programme: Data science**, EdX Certificate	*Jaipur*
2018	**Introduction to Machine Learning**, NPTEL Certificate	*Jaipur*

Skills

Programming	Python, C/C++, Haskell, Matlab, MySQL, PHP, Java
Web	Django, Flask, Apache Server, CSS, JavaScript, MongoDB, React
Utilities	Linux shell utilities, Git, Spark, Databricks, TensorFlow, Keras, Sci-kit learn, Azure ML Services, Azure, LaTeX

Extracurricular Activity

Coordinator CENTRE FOR CONVERGING TECHNOLOGY, DBT-BIF, JAIPUR
2018-19
- Lead Organizer of 2 days workshop on Basics of Bio-Informatics
- Lead Organized of Cloud Computing Seminar
- Organizer and volunteer of cultural event of Department JALSA 2K17

Hackathon Finalist, Winners
March 2018, Oct. 2018
- Rajasthan IT Day- eduHack 4.0 - Finalist
- LNMHacks 3.0 LNMIIT, Jaipur - Finalist
- MLH Local Hack Day, Jaipur - Winners

Cognitive Science Association of India MEMBER
Sept. 2018-Present

Relevant Coursework

A*	Machine learning	A*	Artificial Intelligence	A*	Functional Programming
A*	Computer Organization	A*	Computer Network	A*	Data Structures and Algos
A*	DBMS	A*	Quantum Computing	A	Computational Neuroscience
A	TCP - IP	A	Dynamical system for Neuroscience		

A: Grade for exceptional performance*   *A: grade*

Miscellaneous

- **PageMatrix : Co-Founder** SEO Tool for PageRanking, Keyword prediction and Links-Emails Extraction (Deployed over Web, 1800+ users and 45+ matches)
- Contribute to open source projects like **Coala, Python, NVIDIA** on Github.
- Administered a cloud in CCT DEPT., deploying and managing services for the campus community.