Tuhin Bhattacharya

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M. Tech. – CSE
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Degree	Institute	CGPA/%	Years
M. Tech.	Indian Institute of Technology Guwahati	9.04	*2015*
B. Tech.	Techno India , Kolkata	8.91	*2012*
XII	Sodepur High School , Kolkata	86.80%	*2008*
X	Ramkrishna Vivekananda Mission Vidyabhavan , Kolkata	86.38%	*2006*

EXPERIENCES

ASE-Trainee, Tata Consultancy Services Ltd.
Sep 2012 – Jul 2013

Worked in Navisys, the policy administration system of Sunamerica Annuities and Retirement Services. Gained knowledge about annuities. Worked mainly in maintenance and enhancement of this project. Maintenance activity involved solving any issue with transactions processing related to annuities. Enhancement activity involved any kind of enhancement to system required by Client. One of the major projects I worked on is Reserve Adjustment.
Technology Used: C++, Java, Oracle.

PROJECTS

Phoneme clustering based on acoustic-phonetic study of speech
Jul 2014 – present

Dr. P. K. Das, IIT Guwahati

The project aims to conduct acoustic and articulatory analysis for phonemes of languages. The main goal is to design a phoneme clustering algorithm similar to that of the "Soundex" algorithm, which is a text-based phonetic algorithm to encode the homophones to the same representation. This algorithm will be helpful for high quality multi-lingual speech recognition.

Internet of Things using Stigmergic Communication
Jan 2014 – Feb 2014

Dr. S. B. Nair, IIT Guwahati

The aim was to establish communication between heterogeneous devices using mobile agents. A PROLOG based mobile agent platform 'TYPHON' was used for inter-device communication. The network architecture and communication protocols was also designed.

HMM based Word Recognition System
Sep 2013 – Nov 2013

Dr. P. K. Das, IIT Guwahati

The aim was to make a system which takes a spoken word as input at runtime and outputs the recognized word on screen in real time. The spoken word must belong to a predefined set of words. Hidden Markov Models were built for the words. Techniques used for building the models are Vector Quantization, Durbin's Recursive Algorithm, k-Means clustering algorithm, Viterbi Algorithm.

Holistic approach in Bengali Character Recognition
Jul 2011 – Jun 2012

Dr. Tamaltaru Pal, ISI Kolkata

The aim was to read a scanned image of typed Bengali script and convert it to Unicode text format. Image data was read from TIFF file and skew detection, binarization, horizontal clipping and vertical clipping was applied sequentially to detect a whole word. Then different features were extracted from the words and the recognizer was trained based on those features.

Object tracking in Video
Dr. D. P. Mukherjee, ISI Kolkata

Jul 2010 – Nov 2010

The aim was to track an object, selected in the first frame throughout a video. Firstly brute force algorithm based on similarity measure of consecutive frames was used, secondly Lucas-Kanade method based on optical-flow estimation was used and finally mean shift tracking algorithm based on histogram estimation was used. OpenCV library was used for this project.

TECHNICAL PROFICIENCY

- Languages: C, C++, Java, PHP.
- Databases: MySQL, Oracle.
- Operating System Used: Windows, Linux.
- Tools: Eclipse, Visual Studio.

RELEVANT COURSES

- **M. Tech.:** Speech Processing, Mobile Robotics, Parallel Algorithms, Computational Systems Biology.
- **B. Tech.:** Artificial Intelligence, Soft Computing, Natural Language Processing.

POSITIONS OF RESPONSIBILITY

Teaching Assistant, IIT Guwahati

Jul 2013 – present

Working as TA for Speech Processing and Software Engineering Lab.

Batch Representative, M. Tech. CSE, IIT Guwahati

Jul 2013 – present

Working as Branch Representative, Member of CSEA.

Organizer, Flawless, Techno India

Apr 2011,2012

Conducted coding competition '*Flawless*' during Technical Fest *EDGE* for consecutive two years.

Batch Representative, B. Tech. CSE, Techno India

Jul 2008 – Jun 2012

Conducting activities like CSE-MEET, Fresher's Welcome, and Farewell.

ACHIEVEMENTS

- Got 99.9 percentile in GATE 2013 out of 224160 candidates.
- Secured Second position in Four Year B. Tech. Course, Techno India, WBUT, 2012.
- Won First Prize in "Geek-O-War", an AI programming competition on java, Techno India, 2012.
- Won Prize in "Robo-Race", a manual robotics competition, MCKV Institute of Technology, 2010.
- Won First Prize in "Steal It Away", an AI programming event on java, Techno India, 2010.
- Recipient of National Scholarship (Based On Merit List of Higher Secondary Examination, 2008) from Department of Higher Education, Government of India.

EXTRA CURRICULARS

- Enhanced IIT Guwahati placement portal. Added features like students data entry from csv file, automated mailing system using JavaMail API, updating eligibility upon student data update. Fixed student's eligibility bug having minor departments.
- Developed a database controlled ERP website for Ecifirm following MVC architecture having facilities like CRUD operation on products and customers, entering quotations, challans, tax invoices and purchase bills, report generation in pdf and excel formats and uploading data from excel file.

(References available on request)