

Hridoy Sankar Dutta

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EDUCATION	M.Tech in Computer Science and Engineering 2015 - 2017 National Institute of Technology Durgapur, West Bengal, India <ul style="list-style-type: none">CGPA of 8.95/10 (Dec 2016)
	B.Tech in Computer Science and Engineering 2009 - 2013 Institute of Science and Technology, Gauhati University, Assam, India <ul style="list-style-type: none">CGPA of 9.17/10 (May 2013)
	High School - Shrimanta Shankar Academy, Guwahati (CBSE) - 82.80% 2007 - 2009 Secondary School - Hindustani Kendriya Vidyalaya (CBSE) - 81.00% 2000 - 2007
EXPERIENCE	Assistant Project Engineer, IIT Guwahati Aug, 2014 - Apr, 2015 Developing Text to Speech System in Assamese Language Phase II.
	Summer Research Intern in DISARM Group, NIT Durgapur May, 2016 - July, 2016 <i>Mentored by Dr. Subrata Nandi, Dept. of CSE, NIT Durgapur</i> Developed web application Admin Dashboard for Master Control Station at the time of disaster. Django, a python web framework was used to develop the application.
	Winter Research Intern in DISARM Group, NIT Durgapur Dec, 2015 - Jan, 2016 <i>Mentored by Dr. Subrata Nandi, Dept. of CSE, NIT Durgapur</i> Developed an Opportunistic Network for Android Application.
	Project Intern, IIT Guwahati Jan, 2013 - June, 2013 <i>Mentored by Dr. Sushanta Karmakar, Dept. of CSE, IIT Guwahati</i> Worked on the Project "Hierarchical topology adaptation for distributed convergecast applications"
	Summer Trainee, NEEPCO June, 2011 - July, 2011 <i>Mentored by Subhash Kalita, Manager(System)</i> Developed a e-File Sharing System among the users of the organization. PHP language was used to develop the application.
	Summer Trainee, AMTRON June, 2011 - July, 2011 <i>Mentored by SD & P Divn., AEDC Ltd.</i> MS Access Form Management.
TECHNICAL SKILLS	Strongest Areas - Databases, Algorithms, Parallel Programming Languages - C, Python, Java, C++, PHP, Shell Script, JS Tools/Frameworks - Django, JQuery, STL, \LaTeX , MySQL, SQLite, OpenMP, OpenGL, MPI, BLAS, Git
PUBLICATIONS	<ul style="list-style-type: none">Partha Sarathi Paul, Hridoy Sankar Dutta, Bishakh Chandra Ghosh, Krishnandu Hazra, Sandip Chakraborty, Sujoy Saha, Subrata Nandi, "Offline crisis mapping by opportunistic dissemination of crisis data after large-scale disasters", Proceedings of the Second ACM SIGSPATIAL International Workshop on the Use of GIS in Emergency Management.Sandip Chakraborty, Suchetana Chakraborty, Sushanta Karmakar, Hridoy Sankar Dutta, "Hierarchical topology adaptation for distributed convergecast applications", Proceedings of the 29th Annual ACM Symposium on Applied Computing.
RELEVANT COURSES	Data Structures and Algorithms, Operating System, Unix Programming, Computer Networks, Databases, Automata Theory, Software Engineering <ul style="list-style-type: none">JAVA Programming Language, InfoConnect Aug, 2011 - Feb, 2012

SELECTED
PROJECTS

All projects available on git : <https://www.github.com/hridaydutta123>

- **DFC Query Builder** : A mini-scale Database Engine using C. Features include buffer management, Query Optimization, Indexing using B+ Trees, Temporary Tables, Batching, Custom block size and GUI (web based) Query generator in PHP which communicates with DB server in C++ using sockets.
- **Storage Engine for RDBMS** - Developed a new graph-based storage model for Relational Databases that can perform join queries in linear time. The time for aggregate queries also varies linearly with size of result set. Sample implementation in C++ where data was stored in-memory.
- **Web Service Retrieval** : Wrote scripts to crawl, extract and index over 1000+ service description (OWLS) files. Used interface information to build a search engine that compares 7 categories of keywords. Used NLP techniques on text description find semantics and search services via context matching.
- **Chess Game** : A GUI based Chess game in JAVA for two players that implements all major OOP Concepts. Techniques like backtracking and Greedy Approach was used to determine possible moves. Files were used for storing statistics.
- **Galaxian** : An OpenGL based classic 2D shooting game in C++. Features include collision detection algorithms, double buffering to provide high FPS flicker-free 2D animations, mouse controls, hot keys and space simulation. Statistics and settings stored using files.
- **TAJ Defender** : A sand-boxing mechanism for C and C++ codes using SEACOMP to prevent system calls. Features include custom malloc() using mmap, Resource-time & time-limit for code execution
- **Konnect** : A mini-scale TCP/IP stack for file transfer from one system to another system over a network using C. Features includes headers of all 4 Layers, CRC error check, TCP Handshaking and flow control.
- **FLINT** : Open-Source Contribution to FLINT (Fast Library for Integer Arithmetic) involving algorithms for Matrices over finite field - Patterson Stockmeyer Algorithm, Matrix Squaring, Level 3 BLAS in Matrix Multiplication and benchmarking results of all optimizations.
- **Digital Passbook** : An Android App to keep track of all transactions across multiple bank accounts.
- **Online Banking** : Uses PHP and MySQL - Transaction Management, Loans, Cheque, Fund Transfers.
- **SGC APP** : An android application for Star Gazing Club, NITK - Included a digital magazine reader.
- **CodeChef Code Now** : A chrome extension to instantly open up user's favorite IDE directly from the problem page on CodeChef, SPOJ or CodeForces. Uses chrome Native Messaging.
- **Drive Assist** : An app that uses Kinect v2 for Windows to detect if driver is drowsy using facial features.

ACHIEVEMENTS
AND AWARDS

- Won **3rd Prize in Coding Competition** at Techniche 2012 (IIT Guwahati Technical Fest Coding Event).
- University Rank of **7** in Bachelor Of Technology.
- GATE Qualified (2016) **Gate Score : 488 (AIR 4370)**
- GATE Qualified (2015) **Gate Score : 441 (AIR 6675)**
- Recipient of GATE Scholarship (2014) **Gate Score : 582 (AIR 2139)**
- Passed A level examination of National Cadet Corps (NCC).
- Winner of Counter Strike Gaming Competition at Technoshine 2015, Technoshine 2016, Aarohan 2017 and Rectasy 2017 held at NIT Durgapur.

HOBBIES

Handling Systems, Watching Documentaries, Star Gazing, Editing Wiki Pages, Solving Puzzle

MORE

Please visit <https://hridaydutta123.github.io>