Prashant Singh
Operations Research
National Institute of Technology, Durgapur

M.Tech.
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Education

- National Institute of Technology, Durgapur

    - M.Tech. in Operations Research, CGPA 7.75, (2016 - 2018)
    - Graduate Courses : Programming Language and Data Structure, Automata and Algorithms, Discrete Mathematics, Operations research, Probability and Statistics, Optimization Techniques, Numerical Methods

- National Institute of Technology, Durgapur

    - B.Tech. in Biotechnology with open electives from Computer Science, CGPA 7.0, (2007 - 2011)
    - Undergraduate Courses : Data Structures, Computer Networks, Operating Systems, Communication Network, Database Management Systems

Employment(s)

- As a Teaching Assistant, taught following courses during M.Tech. at NIT Durgapur (July 2017 - May 2018)

    - Numerical Analysis Lab using C programming, May 2018 .
    - Operations Research Lab using Matlab, Dec 2017 .

- System Engineer, TCS(Tata Consultancy Services, Chennai) (July 2011 - July 2013)

    - Remotely managed integration servers installed on Redhat systems using linux commands and script.
    - Created web services to migrate data from legacy system IBM DB2 database to latest oracle database using Oracle Middleware Technology . The data of DB2 was exposed in XML and the web services were consuming these data and inserting it into Oracle database .

Projects

- Created a web application for handling pizza restaurant's online orders , using Django web framework : , HarvardX: CS50's Web Programming with Python and JavaScript, Jan 2020
  Features supported :

    - User can register and login
    - Items can be added to cart . User can see cart items even after logout or from different machine .
    - Supports multiple item like pizza with topping, salad, pasta and can be extended in future
    - User gets order confirmation email

- Created a chatting application named Flack , similar to Slack , using python, flask and socketIO . User can register, create new channel , delete their post, check others post in real time using socketIO . : , HarvardX: CS50's Web Programming with Python and JavaScript, Jan 2020

- Created a book review website, lookthebook . Technology used are Html, Javascript, Python, Flask, Postgresql database : BookReview , HarvardX: CS50's Web Programming with Python and JavaScript, Dec 2019
  Features supported :

    - User can register, login and logout
    - Instant book search by entering book's title, author, isbn or published year using ajax
    - Check average rating of book given by Goodreads website
    - Can comment on book

- M.Tech project: Recognition of printed Odia(A language spoken in India) character using neural network , June 2018.

    - recognized 62 basic Odia characters (10 numerical, 12 vowels, 40 consonants) in a given image and convert them to computer editable text using deep neural network. Got an accuracy of 97.75
    - Input layers = 784, hidden layers = 300, output layers = 62
    - Technology used: Python, OpenCV

- Created web based game 2048 :

- Created following command line games
  - 2048 in C++
  - "Game of Fifteen" in C
- Created GUI game
  - Breakout in C

Additional Courses

- Deep Learning Specialization, Coursera, Jan 2019
  - Neural Networks and Deep Learning, Grade Achieved: 98.6%
  - Structuring Machine Learning Projects, Grade Achieved: 96.7%
  - Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization, Grade Achieved: 100.0%
  - Convolutional Neural Networks, Grade Achieved: 98.9%
- CS50's Introduction to Computer Science, HarvardX, July 2019
- Introduction to Computational Thinking and Data Science, Grade achieved 97%, MitX, Aug, 2018
- Introduction to Computer Science and Programming Using Python, Grade achieved 99%, MitX, Sept 2017
- Machine Learning Stanford University, Coursera, November 2017, Grade Achieved: 97.6%
- Algorithms: Design and Analysis, Part 1, Coursera, Grade Achieved: 84.5%, September 2015
- Front-End JavaScript Frameworks: AngularJS, Coursera, July 2016
- Introduction to jQuery, Grade achieved 98%, Microsoft DEV208X, EdX
- Introduction to Computing with Java, Grade achieved 95%, EdX, Sept, 2014

Skills and Technologies

- Web Framework : Django, Flask, JavaEE
- Algorithms , Data Structure, Object Oriented Design, Responsive Web Design
- Programming languages: C++, Python, Java , C , Matlab
- Frontend : Ajax, Javascript, Html, CSS
- Backend : Postgres, sqlite, oracle
- Tools and IDE : Vim, Git, GDB, Eclipse IDE, Visual Studio, OpenCV, LaTeX
- Operating system : Ubuntu, Mac, Windows

Achievements

- Solved 450+ Leetcode problems
- All India Rank 1593 among 1,08,495 in GATE-2016 in Computer Science .
- Cummins Inc.'s client provided the certificate of appreciation for their database integration task .