# Pranay Sarkar

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## EDUCATION

**West Bengal University of Technology**                    **Kolkata, West Bengal, India**
*B.Tech in Information Technology GPA: 8.30/10.0*                    *Graduation: June 2012*

## EXPERIENCE

**360 Treasury Systems AG, Deutsche Börse Group**                    **Frankfurt am Main, Germany**
*Software Developer*                                                  *Sep 2018 - Present*
- Working with high frequency, low latency multi-threaded distributed trading system
- Designed architecture for a novel Single Sign-On system to interact with more than 20 internal tools
- Designed and implemented Support Site to monitor hundreds of FX transactions for clients, and integrated with Request for Stream (RFS), Execution Management System (EMS)
- Worked with MiFID II regulation tool (Directive 2014/65/EU), while improving the architecture and partially implemented it
- Worked with EMS tools like Change Request, Company Administrator - a tool to manage market-maker entities
- Worked with Docker infrastructure to write and maintain different auto deploy scripts for different part of the trading platform independently of other components
- Helped in migrating older code-base form subversion to git. Wrote some industry standard git hooks to accommodate existing workflow.

**360 Trading Networks AG, Deutsche Börse Group**                    **Frankfurt am Main, Germany**
*Platform As a Service (PaSS) Developer (Part Time)*                    *May 2017 – Aug 2018*
- Modified and maintained Patch Tool - that is used by every developer to transfer changed classes quickly to distributed development machine
- Worked on dependency management tools and helped in moving the retro components from Maven to Gradle and designed necessary automated build systems around them
- Supported more than 200 developers with integration and troubleshooting and usage of internal tools

**Ponttec GmbH**                                                      **Langen, Germany**
*Software Developer for Industrial Automation (Part Time)*                    *Nov 2015 – Jan 2017*
- Worked with 50% contract along with Freelancing
- Worked on PHP based, EFRIS (Easy Flexible Reliable and Intelligent Solution) ERP  CMS system
- Designed and developed RESTful API from the Scratch to interact with existing system and new mobile systems
- Worked on Android app based on Ionic Cordova
- Improved existing migration mechanism and indexing of MySQL database and integrated MongoDB with an existing PHP platform
- Worked on modifying MEAN stack with MySQL

**Freelancer - Full Stack Software Developer**                    **Kolkata, India**
*Full Stack Developer*                                                  *Feb 2011 – Apr 2017*
- Interacted with approximately 50 clients, where many start from freelance development and turning into long term maintenance
- More than 15 projects on PHP, JavaScript, JQuery - most of them were for public open source media listing
- Interacted with clients for around 20 custom projects with open source duscission forum software like vBulletin, Invition Power Board (IPB), phpBB, Simple Machines Forum etc
- Around 20 projects in Wordpress (popular blogging software) for both individuals and companies
- Language and Technology stack: PHP, CSS, HTML5, MySQL, Redis

## INTERNSHIPS

**Research Internship on Distributed threat prevention system**          *Oct 2015 - Nov 2016*
- Topic: Botnet Surveillance System (BoSS)
- Developed a centralized Server-side application and client-side application (Multi Platform) that allows easy adaptation and creation of botnet crawlers for P2P-based botnets
- Implemented server side code in Java and the client side application was implemented in python. Server could handle 0.1 million requests from clients per second.(Implemented Ring Buffer)
- Utilized docker for setting up the overall system
- Utilized NoSQL databases such as Redis, MongoDB to persist data

## PROJECTS

**BitsB v1.5**                                                            *Jan 2010 – May 2016*
- Worked on a PHP based open source peer-to-peer document sharing protocol and a centralized tracking system
- Some features were made from scratch (e.g. live chat, advanced discussion forum)
- Used CSS optimization and SQL live query caching and optimization using *Memcached*
- Worked on this in my free time, during my freelancer Web development period. Some customised versions of this was also made for some clients during that time

**Blockchain based distributed Web3 housing marketplace**               *Nov 2021 – Feb 2022*
- As the final Project in Blockchain Developer MOOC at Udacity, extended the basic provided resource to develop a secure digital public records of building ownership
- Each title can be added as a separate Asset in listing websites like OpenSea and each of them are secured using zk-SNARK (Zero Knowledge Proof) varification system
- All titles are grouped into a custom minted collection with the option to buy, sell and bid
- Deployed in testnet: https://testnets.opensea.io/collection/udacity-coin-pranay

## CERTIFICATIONS

- **Blockchain Developer**, Udacity (Feb 2022)
- **Full Stack Web Developer**, Udacity (Oct 2021)
- **Data Science Specialization**, Johns Hopkins University, Coursera (Aug 2018)
- **Machine Learning Specialization**, University of Washington, Coursera (Jul 2018)
- **Deep Learning Specialization**, DeepLearning.AI, Coursera (June 2018)
- **Functional Programming in Scala**, Ecole Polytechnique Fédérale de Lausanne, Coursera (Mar 2018)

## ADDITIONAL

- Participated in Merck Hackathon 2015 'Future of Health' and ranked 2nd while working with the topic 'Using AI to optimize medicine delivery system'
- Participated in AGT International Hackathon 2016
- Programming Languages: Java, Python, C, Shell, HTML/CSS, Javascript, NodeJS, PHP, Scala
- Technologies: Docker, Spring, Hibernate, SQL (Oracle, Postgres, MySQL), NoSQL (Redis, MongoDB), Vue.JS, Angular