

Rohit Gupta

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Worked in banking and finance software sector for 12 years serving more than 20 banks globally as the core banking solution provider. Having Strong research capabilities, currently perusing Ph.D. from Department of Computer science and Engineering, IIT Bombay.

- Developed IoT infrastructure including IoT nodes for sensing and actuation of electrical appliances, data acquisition, storage, and analysis system for the sensor data.
- Designed innovative products and patents including a low-cost Smart Meter capable of energy disaggregation and a socket level phase identification device. Designed a new technique to infer power consumption of appliance by sensing the voltage fluctuation.
- Worked as a teaching assistant for a number of courses, and contributed in conducting tutorials and lab for 100+ students and designing lab work and assignments.
- Designed and implemented new modules for Flexcube including “Step-up program” the Shinsei Bank’s USP to its customers, MIS, GL reconciliation, Deposit insurance, Step-up deposits, and Multicurrency deposits for Shinsei Bank Japan, Recurring deposits for Indian banks, Term deposits maturity processing system for Kotak Mahindra Bank India.
- Managed Flexcube Implementation and support in Japan, Nigeria, Srilanka, and India, Led teams to perform business process analysis, data migration, customization, resolution of the issues, and customer training at multiple client sites.

Work Experience

- **Department of Computer Science and Engineering, IIT Bombay.** **Mumbai**
Research Scholar *Jul 2012 – current*
Has done a large number of projects over and above working on the research topic 'Reducing the cost in electrical systems by optimal sensor placement'. These projects include installing Advance metering infrastructure (AMI) in multiple buildings, designing innovative devices which resulted in a couple of patents and startup.
- **Oracle Financial Services Software Ltd** **Tokyo**
Consulting Practice Manager client: Shinsei Bank *April 2004 – September 2010*
Led teams and worked on design, development, and deployment of different modules of Flexcube - Retail. The major projects done during this period include "Step-Up Program", GL Reconciliation system, Deposit Insurance and Loans Amortization system, and managed the data migration for Shinsei Aozora mearger. These projects were milestones in the banks history that made the bank come out of its difficult periods.
- **Oracle Financial Services Software Ltd** **Tokyo**
Consultant Client: Nippon Shinko Bank *January 2004 – March 2004*
Singlhandedly resolved hundreds of issues and the bugs (reported at the site during the last 6 months of project implementatin) within only two months period.
- **Oracle Financial Services Software Ltd** **India**
Consultant Client: Kotak Mahendra Bank *July 2003 – December 2003*
Led team to enhance the Deposit maturity module for advance processing of maturity proceedings to enhance customer experience. Objective of the project was to develop custom deposit maturity procissing module to send the maturity amount to the customer in advance.
- **Oracle Financial Services Software Ltd** **India**
Consultant Site: FLECEL *October 2002 – Jun 2003*
Responsible for leading the team for implementation and customizations for the first ASP provider of Flexcube (a joint venture of HDFC and i-Flex)
- **Oracle Financial Services Software Ltd** **Nigeria**
Consultant (Support Head - Flexcube Retail): *November 2001 – October 2002*
Supported FLEXCUBE Universal Banking solution at 11 banks in Nigeria including Access Bank, Diamond Bank, Guaranty Trust Bank, Union Bank of Nigeria, United Bank for Africa, UBA Prestige Bank.

- Oracle Financial Services Software Ltd**

Associate Consultant (Team Leader):

Led the team of developers to introduce recurring deposit module in Flexcube.

India

September 2000– October 2001
- Oracle Financial Services Software Ltd**

Associate Consultant (Team Member): Nations Trust Bank

Installed and managed the Flexcube bankend system and migrated the data from the old system. During the implementation of the project learned the functionalities of different system. When the project went live took the responsibility of supporting the entire system.

Srilanka

December 1999 – September 2000
- Oracle Financial Services Software Ltd**

Associate Consultant (Team Member): Nations Trust Bank

As a team member in the project migrated Flexcube from UNIX platform windows using DCOM based 3-tire architecture. Performed unit testing and supported the integration testing. In the system integration phase of the project, supported the system bug fixing for the entire maintenance module.

India

January 1999 – November 2000

Notable Projects.....

Projects at IIT Bombay

- **Low cost smart meter:** With the smart City and Smart Grid initiatives, there is a huge potential for smart energy meters capable of providing energy readings at a granular rate. The smart meter with inbuilt communication and disaggregation capabilities can be a game changer.
- **Plug Phase Identification system:** The imbalance of electrical load is inevitable in large buildings. Utility imposes a heavy penalty for such imbalance but it is very difficult to maintain the phase balance because the information about the phase of the individual appliance or the sockets is unknown. The algorithm (patent in process) and the planned device can provide the phase information of the socket just by plugging.
- **IoT data collection infrastructure:** For the research activities in our lab, we deploy a large number of sensors and collect the data from these sensors continuously. The data collection infrastructure designed is continuously in operation and is capable of providing real-time analytics and control instructions to actuation nodes.

Projects done for Shinsei Bank

- **Design and delivery of 'Step Up Program':** The USP of Shinsei Bank is to provide benefits to the customers based on the amount of business done by the customer with the bank. The 'step-up program' which provides this facility based on the customer weighted daily balance in a verity of products and transactions done by the customers including FX, mutual fund, deposit purchase etc. The program is the most complex customer benefit banking program which impacts wide range of products offered by the bank and each transaction done by the bank. The launch of this program was spread over three years and brought the bank back into profits.
- **GL Reconciliation:** For any financial organization, General Ledgers should always represent the true picture of its operations. For Shinsei Bank, the verification of GL against all the accounts is done daily, which is a daunting job because of its worldwide 24x7 operations and tens of interconnected systems.
- **DIC:** Banks vouch for the customer deposits by insuring them. Unfortunately, the deposit insurgence laws are very complicated. DIC system takes care of more than 500 such combinations of conditions and generates the insured position for each customer. The entire system was developed in 3 weeks which saved the bank on a hefty insurance premium.
- Other significant projects include development of transaction recovery system for Flexcube, MIS system, Launch of Deposits schemes like multi currency deposits with currency switching capabilities, Foreign currency saving accounts.

Projects Prior to Shinsei Bank

- **Product support Nigeria:** Led team to support 11 banks went live in a very short duration. Supported the new product and made it stable with a large number of bug fixes.
- **Flexcube Generic Releases:** 'Recurring Deposit module for Flexcube' Recurring deposit is one of the services offered by almost all the Indian banks where the customer can deposit a fixed amount every month while receiving the higher rate of interest offered for long-term deposits. This module was added to Flexcube when the product was offered to Indian banks.
- Contributed to a large number of development, Implementation and support projects.

Patents

- 201821021947 Plug phase identification by simultaneous voltage sensing for solving load imbalance.
- 201821021779 Sensing voltage difference to identify appliance operation and energy disaggregation.

Publications

Rohit Gupta and Krithi Ramamritham. Extracting the full potential of voltage. In *Proceedings of the Ninth International Conference on Future Energy Systems*, e-Energy '18, pages 211–222, New York, NY, USA, 2018. ACM.

Rohit Gupta, Rinku Shah, and Apurva Mhetre. In-memory, high speed stream processing. In *Proceedings of the 8th ACM International Conference on Distributed Event-Based Systems*, DEBS '14, pages 306–309, New York, NY, USA, 2014. ACM.

Kartik Palani, Nabeel Nasir, Vivek Chil Prakash, Amandeep Chugh, Rohit Gupta, and Krithi Ramamritham. Putting smart meters to work: Beyond the usual. In *Proceedings of the 5th International Conference on Future Energy Systems*, e-Energy '14, pages 237–238, New York, NY, USA, 2014. ACM.

Awards and Achievements

- Work done at SEIL is selected in IIT-Madras I-NCUBATE programme.
- Certificate of Achievement by IIT Bombay, for Excellence of work as a Teaching Assistant.
- i-appreciate by i-flex solutions ltd for the recognition of the exemplary performance towards Shinsei Bank Onsite Projects.
- GATE 2012(Computer Science) AIR 642
- GATE 1994(Electrical) AIR 708

Education

Academic Qualifications.....

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| ○ IIT Bombay | Mumbai |
| ○ <i>Ph.D. (CSE),</i> | <i>2012–2018</i> |
| ○ C-DAC | Pune |
| ○ <i>Diploma in Advanced Computing, First Class</i> | <i>1998–1999</i> |
| ○ Department of Business Management | Nagpur |
| ○ <i>MBA (Finance and Marketing), First Class</i> | <i>1996–1998</i> |
| ○ Govt. Engineering Collage | Ujjain |
| ○ <i>BE (Electrical Engineering), First Class</i> | <i>1985–1990</i> |

Technical and Personal skills

- **Programming Languages Proficient in:** C, C++, Python, LaTeX, PL/SQL.
- **Industry Software Skills:** Matlab, Scikit-Learn, STM32, Arduino (Designed boot loaders and wrote libraries).
- **General Business Skills:** Software Project Management, System analysis.
- **Teaching Assistantship done for:** Embedded Systems, Digital Image Processing, Information Retrieval & Mining for Hypertext & the Web, Database and Information Systems.