Kranthi Kode

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Work Experience: (Total: ~ 5 years)

production quality work

- **Yahoo! Inc.:** (Software Engineer, 06/2010-**current**) **Advertising Products**
  - Developed **Machine Learning model based, highly scalable, low latency distributed services** with config driven bucket (A/B) testing of new models for next generation online advertising platforms in both guaranteed (premium) and non-guaranteed (RMX) display advertising. These services support continuous experimentation through modeling innovations with minimal code changes.
  - CEO Challenge: Built a small team to execute my proposed algorithmic improvements to generate **3 million dollars of additional revenue** per quarter. This was reviewed and approved by Marissa Mayer.
  - **Grid computing**: Developed, tested and deployed a grid pipeline that uses **Hadoop map-reduce** (Pig and Perl scripts) to process data from logs on a cluster to provide forecasts for downstream services.
  - **Performance Engineering:** Improving scalability and latency aspects of the non-guaranteed display Ad Server (serves ~10 billion impressions per day): indexing, caching, etc. Implemented diagnostic modules and used profiling tools. **Improved QPS from 1500 to 8000** (400%) of a service through performance optimizations using one such module, for example.
  - Mentoring new hires: Scrum, architectural discussions, debug sessions, code reviews, etc.
  - (Intern) 06/2010 to 09/2010: designed and implemented a Machine Learning model for assessing the performance of ads. This work resulted in a **patent** (Pub# 2012/0197711 A1).

- **NTPC Ltd.**: (Design Engineer) 08/2005 to 08/2007: **API programming for platform integration**, developed **algorithms** to aid the design process and implementation of **ERP**.

- **Gammon India Ltd**: 04/2004 to 05/2005: Implementation of **ERP** services at the project sites, etc.

- **ERDAS India Ltd.**: (Summer Intern)
  - 03/2003 to 05/2003: **API programming** to facilitate data flow between different **CAD/GIS software** products (Total Station, Auto CAD and ERDAS Imagine).
  - 03/2002 to 05/2002: Contributed to Hyderabad Municipal Urban Information System, an enterprise digital **maps** product (**UI** and **backend** features).

Research: (4 years)

proof of concept work

- **Ontology Based Search**: Developing framework for carrying out search on databases like Pubmed.
- Quantitative Unmixing: Alternative algorithm to least squares, incorporating **Optimization**.
- caNanoLab: A web interface that uses a **J2EE** architecture. The backend is a **MySQL** database.
- PIDO: Developed a platform to integrate CAD and analysis tools (**API programming**).
- **Iterative SVD**: On-the-fly computation of reduced-order bases by iterative update of SVD.
- A **machine learning** approach to address false positives in active structural health monitoring.
- Implementation and Performance Studies of Multilevel k-Way **Partitioning of Graphs**.
- Analysis of Nash Equilibria and **Near-Optimal Designs of Networks** with Selfish Agents.
- Linesearch, Multivariate Bound-constrained **Optimization Routines** and Minimum Surface Problem

Education:

- MS in **Computational & Mathematical Engineering**, Stanford University, GPA: 3.87 / 4.00
  Related coursework: Machine Learning, Design of Algorithms, Large Scale Computing, Comp. methods in data mining, Parallel Programming, Database Systems, Numerical Optimization, etc.
- MS in Civil & Environmental Engineering, Stanford University, GPA: 3.60 / 4.00
- B.Tech. (equivalent to B.S.) from NIT, Warangal. May'04, Civil Engineering, Scored highest.

Selected Achievements:

- Received **Merit Scholarship** and Full Tuition Waiver during under graduation.
- Presented **16 technical papers** in various conferences including three prize winning talks.
- Scored **highest** in NTPC's yearly **performance appraisal** among 500 new hires.

Technical Skills:

C++, Java, VB (.NET), MATLAB | Hadoop | Perl, SQL, Pig | MySQL, Oracle | Eclipse, Net Beans, Visual Studio.