

NIANTHRINI VIVEKANANDAN

C: 408-839-6869 | niavivek@berkeley.edu

Education

Masters in Information Management and Systems University of California – Berkeley Focus Areas: Data Science, Spatial Analytics, Information Visualization and Product Management	2018
Ph.D., Chemical Engineering University of South Florida Chemical Engineering	2013
B.Tech, Chemical Engineering Coimbatore Institute of Technology Chemical Engineering	2007

Skills

Data Analytics: SQL, R, MATLAB, IPython	Programming: Java, Python, C/C++, JavaScript, HTML, JSP, SQL, CSS
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Experience

Web Application Developer - Intern Encore Software Services	Dec 2013 to Jun 2014
<ul style="list-style-type: none">An application was designed to aid the managers in people management, project management and time sheet management processes.I developed the prototype for this application using Java, JavaScript, HTML, SQL, JSP and customized it for different user roles with varying permission levels to access the functions of the application.The application was released for pilot testing to favorable results, including the automation and increased efficiency of HR processes and timely release of paychecks.	
Research Assistant University of South Florida	Jan 2008 to May 2013
<ul style="list-style-type: none">A number of expensive catalysts are used in industries for purification of air, conversion of biomass to liquid fuels and photo catalysis and it is important to extend the life of these catalysts to reduce costs.I used Factorial analysis to determine the important factors influencing the efficiency of catalyst and computational studies to study how promoters influenced these factors. I suggested using a promoted catalyst to improve the efficiency and life of the catalyst.	

Projects

Java application to customize a vehicle	<ul style="list-style-type: none">I designed a scalable KBB.com type application to customize an automobile based on the user needs, to learn the advanced methodologies in Java and the importance of designing in a web application development.I created Client-Server type interactions including exception handling using custom exceptions, multi-threading with synchronization and capability to handle multiple vehicle configurations by multiple clients.The back-end was designed with future implementations in mind so that the same design could be used over years with changes to the front-end.
Statistical model to identify the factors affecting cobalt particle size	<ul style="list-style-type: none">Various factors like method of preparation, Cobalt support loadings, solvent used, Cobalt wt% influence the size of Cobalt catalyst during experimental preparation.I used full factorial design and fractional factorial design to identify the factors affecting the particle size. This study would help in design of experiments for preparation of Cobalt catalyst.

Publications

- Bijith D Mankidy, Nianthrini Balakrishnan, Babu Joseph, Vinay K Gupta, CO Oxidation by Cobalt Oxide: An Experimental Study on the Relationship between Nanoparticle Size and Reaction Kinetics, Austin J. Chem. Eng., 1(2) (2014) 1008(16).
- Chi-Ta Yang, Nianthrini Balakrishnan, Venkat Bhethanabotla, Babu Joseph, Interplay between subnano Ag and Pt clusters and anatase TiO₂ (101) surface: implications for catalysis and photocatalysis, J. Phys. Chem. C., 118 (9) (2014) 4702-4714.
- Nianthrini Balakrishnan, Babu Joseph, Venkat Bhethanabotla, Effect of Pt and Ru Promoters on Deactivation of Co Catalysts by C Deposition during Fischer Tropsch Synthesis: A DFT Study, Appl. Cat. A: Gen., 462463 (2013), 107-115.
- Nianthrini Balakrishnan, Babu Joseph, Venkat Bhethanabotla, Promotional Effect of Platinum in Fischer Tropsch Synthesis Using Cobalt Catalysts: A DFT Study, Surf. Sci., 606 (2012) 634-643.

Selected Courses

Spatial Data and Analysis, Applied Natural Language Processing, Advanced Java Programming, Introduction to SQL, Data Structures using Java, Java programming, Data Structures and C.