**Shashi Rautela**

[rautelsi@mail.uc.edu](mailto:rautelsi@mail.uc.edu) | [LinkedIn](https://www.linkedin.com/in/shashirautela/) | [GitHub](https://github.com/snayal?tab=repositories) | [ResearchGate](https://www.researchgate.net/profile/Shashi_Nayal_Rautela) | Ph: (862) 591-8565 | Cincinnati, OH

# EDUCATION

**University of Cincinnati, OH, USA** **January 2021-Present**

**Carl H. Lindner College of Business**

*Master of Science in Information Systems* GPA **3.9/4.0**

*Graduate Certificate, Data Analytics*

**College of Medicine**

*Graduate Certificate, Biomedical Informatics*

**Nanyang Technological University (NTU), Singapore**

*Master of Science in Marketing and Consumer Insight* GPA **4.03/5.00**

**G.B. Pant University of Agriculture and Technology, India**

*Master of Science in Biochemistry (by Research)* GPA **4.303/5.00**

# TECHNICAL SKILLS

* Languages: Python, R, SAS
* BI Tools: Power BI, Tableau
* Database: SQL, Oracle, MySQL
* Web technologies: ASP.NET, C#, HTML, CSS, JavaScript
* Big Data: Hadoop, MapReduce, PySpark, Databricks, Apache Spark with Python, HDFS, Data Science
* Cloud Computing: AWS, Azure, Data Factory, Azure ML, Docker, GitHub
* Bioinformatics Tools: cBioPortal, iLINCS, TCGA, UCSC & Ensembl Genome Browser

# ACADEMIC COURSES

* Cloud Computing, Statistical Computing, Data Analysis Methods, Data Mining for BI, MG BI Projects
* Data Modeling, Database Design, System Analysis & Design
* Data Warehousing and BI, Big Data Integration
* Web Dev w/.NET, XML & Web Services
* Medical Informatics, Functional Genomics
* IS Project Management, IS Security

# CERTIFICATIONS AND TRAINING

* **Microsoft Azure Fundamentals**, Microsoft, September, 2021
* **AWS Certified Cloud Practitioner**, Amazon Web Services (AWS), August, 2021
* **S\* Bioinformatics Course** - S\* Life Science Informatics Alliance, Singapore
* **Good Distribution Practice for Medical Device** (GDPMDS) - SGS, Singapore
* **Singapore-Stanford Biodesign Innovation** Class 2014 - Singapore-Stanford Biodesign
* **Responsible care and use of laboratory animals** (RCULA) - A\*STAR, Singapore
* **In-house Safety Induction** Training - National Cancer Centre, Singapore
* **Specialist Diploma for Molecular Biotechnology** (Short courses) - Ngee Ann Polytechnic, Singapore

# ACADEMIC PROJECTS (Links)

* [Covid Data Visualization using Tableau](https://docs.google.com/presentation/d/1z3c3W6g_edkwQt1SZmnTyKxOteiVC-Ak/edit?usp=sharing&ouid=108613999137146211587&rtpof=true&sd=true): Tableau dashboard showing COVID-19 spread and state’s vaccination efforts to prevent coronavirus disease spread.
* <https://propertyinvestment.azurewebsites.net> - Deployment of web service on Azure created using Visual Studio/GitHub by integrating 2 external data sources (https://data.cincinnati-oh.gov/)
* [Identification of Hepatocellular Carcinoma Subtypes](https://drive.google.com/file/d/1EiWcSkfCmw4VwmzFqv6KHie1OlTzdJlx/view?usp=sharing): Identification of Hepatocellular Carcinoma subtypes using the TCGA dataset by identifying differentially expressed genes.
* <https://nayal.azurewebsites.net> - .NET Web Development and published on Azure
* [Integrating Multi-Omics data and EHR to advance Precision Medicine](https://drive.google.com/file/d/1veUtGJf3QrzNZFTCzN29jCqZob-ooWKr/view?usp=sharing) : Integrating analysis of multi-omics-based approach to target the right treatment to the right patient at the right time by focusing on understanding and treating disease as well as lead to the discovery of novel biomarkers.
* [Prediction model using Supervised Learning](https://drive.google.com/file/d/16C6tLSOjwtc1e_NCX48SNao5SdolGDWk/view?usp=sharing) : Predication model to diagnose abnormality in the spine which causes Spondylolisthesis in the patient by using two different supervised learning methods named Logistics Regression and Decision Tree Model and its comparison using R.
* [Wholesale customer Segmentation using Unsupervised Learning](https://drive.google.com/file/d/1pxpy3_A166Ba7JIsObHD3aanVoVZyqiI/view?usp=sharing) : Unsupervised learning model to identify customer segments using K-means clustering technique. Dataset is taken from Kaggle.
* [Alteryx Designer](https://docs.google.com/presentation/d/1tXEqmSShtDpzLBOCsbk0zLZ0p8SiKiuh/edit?usp=sharing&ouid=108613999137146211587&rtpof=true&sd=true): Self Service Data analytics using Alteryx Designer to quickly access, manipulate, analyze and visualize big data. (Source: world bank data literacy)
* [House Sales Price Prediction Model:](https://drive.google.com/file/d/17evLBjJhRv0-Lpue19ZOIxQN3tRte0kR/view?usp=sharing) To develop Linear Regression model to predict the sold prices of houses in Mason, OH using self-collect data using R.
* [Flight Landing Analysis:](https://drive.google.com/file/d/1noaD7R-il_2OPoKmLHH_SAGFq6WOhOJ0/view?usp=sharing) Identification of key factors affecting the landing distance of commercial flights by creating linear regression model keeping landing distance as dependent variable using SAS
* [ERPsim Logistics Game Post Analysis](https://docs.google.com/presentation/d/1JyVCBBHA35THBbfQwERpzhbzV-HBqLpI/edit?usp=sharing&ouid=108613999137146211587&rtpof=true&sd=true): Played five round of ERPSim logistics game and presented its post analysis report.

# RESEARCH PUBLICATIONS

* Ultrasensitive Near-Infrared Raman Reporters for SERS-Based In Vivo Cancer Detection. [**Angewandte Chemie 50(27): 6089-92**](https://onlinelibrary.wiley.com/doi/10.1002/anie.201007841)
* Sputtering-growth of seeded Au nanoparticles for nanogap assisted surface-enhanced Raman scattering (SERS) bio-sensing. [**Smart Nano-Micro Materials and Devices - December 2011**](https://www.spiedigitallibrary.org/conference-proceedings-of-spie/8204/82041O/Sputtering-growth-of-seeded-Au-nanoparticles-for-nanogap-assisted-surface/10.1117/12.903639.short?SSO=1)
* ITIL Based Service Desk: Interacted with cross-functional team of 5 analysts to analyze IT functions, designed and implemented IT Helpdesk solution, prepared reporting dashboard for stakeholders and presented to senior leadership.

# PROFESSIONAL EXPERIENCE

## Regulatory Affair Specialist- Medical Device 01/2015 – 09/2016

*Mindwave Solutions, Singapore*

* Evaluated Pre-submission classifications with regulatory bodies, developed product specification for new product launch per compliance, fulfilled departmental regulatory actions, ensuring compliance with HSA amendments.

## Lab Manager & Research Officer, Laboratory of Bio-Optical Imaging 02/2009 – 02/ 2012

*Singapore Bio-imaging Consortium, BMSI, A\*STAR, Singapore*

* Fabricated Nanoparticle-assembled fiber tip for SERS-based sensing application through cross-functional collaborations
* Synthesized different size of gold nanoparticles & nano-substrates.
* Developed Bimetallic Metal Film Over Nanosphere (BMFON) for SERS based biosensing.
* Techniques used UV/Visible spectroscopy, AFM, SEM, TEM, Raman Spectroscopy (laser 633nm, 750nm) Mouse xenograft.

## Research Officer – Department of Molecular Endocrinology 07/2007 – 11/ 2007

*National Cancer Centre Singapore (NCCS), Singapore*

* Worked on project based on therapeutic drug development for advanced Hepatocellular carcinoma (HCC)
* Performed protein purification, SDS-PAGE, Western blotting, ELISA, FACS (Flow cytometry)
* Managed primary cells culture, cell lines passage, inventory of media and supplements, vendor management

## Research Officer – Department of Biochemistry 06/ 2005 – 02/ 2006

*Yong Loo Lin School of Medicine, University of Singapore (NUS), Singapore*

* Worked on project to analyze the impact of NADPH oxidase derived superoxide anions Diabetes Type-II
* Performed western blot, cell culture, flow cytometry, and Florescent Confocal microscopy
* Cultured and maintained animal Cell lines (Bovine aortic endothelial cell) for cell-based assays.

## IT Systems Engineer 07/2001 – 05/2005

*GlobalFoundries, Singapore*

* Communicated with stakeholders as point of contact and resolved 95% issues including IT Systems, Networks, Applications and End user Computing Systems in first call; handled inbound customer service requests and issues on daily basis.
* Conducted sessions to troubleshoot and root cause analysis to create knowledge articles as part of improvisations.