

# Ruchi Shah

PhD student | University of Houston | Software Professional | Credit Suisse Business Analytics  
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## RESEARCH & PUBLICATIONS

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BigData'19	<b>xSVM: Scalable Distributed Kernel Support Vector Machine Training</b> (IEEE International Conference on Big Data in 2019. Acceptance Rate: 19.3% (106/550))
ICS'20	<b>TensorSVM: Accelerating Kernel Machines with Tensor Engine</b> (34th ACM International Conference on Supercomputing)

## SKILLS

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<b>Certification</b>	70-483 Programming in C#
<b>Languages</b>	C, C++, CUDA, Open MP, MPI, JAVA, WCF, PL/SQL, Oracle, XML, XAML, Power shell, C#
<b>Libraries</b>	LAPACK, CuBLAS, CBLAS, Scikit-learn, Keras, Android API
<b>Tools</b>	MATLAB, Anaconda, Spyder, Jupyter, GitHub, Visual Studio, Tortoise SVN, Eclipse, Glassfish, Tomcat, Tibco EMS, Latency buster messaging (29_west), Octopus, Unity, Odyssey, JIRA, One tick (Market data), Salesforce, SharePoint 2010, Tableau, Business Objects, LINQ Query
<b>Database</b>	MySQL, Oracle, MongoDB, Informatica
<b>Platforms</b>	Linux , Ubuntu, Windows, Android SDK

## EXPERIENCE

### University of Houston, Main Campus

*RA (Research Assistant)*

Houston

August 2018 - Present

Ongoing projects

- Remote internship at **'Oak Ridge National Lab'** – Restructuring the vtk-m repository (<https://m.vtk.org>) to perform high performance isocontouring (Flying Edges) with relatively minimal trade-off on the image resolution.
- **FlashSVM** – A highly scalable and performance centric hybrid (GPU-CPU) design model for Kernel machine training.
- **Consensus Protocol**(*Most recent*) – Simulating the **Consensus protocol** for performance benchmarking and designing an innovative solution to overcome the shortcomings of Practical Byzantine Fault Tolerance (PBFT)

### Credit Suisse Business Analytics

*ENO (Exempt non-officer)*

Mumbai

July 2014 – July 2018

- Full stack developer for a high frequency, low latency algorithmic trading application that markets around 3000+ clients and performs real-time trading for various instruments - Forex, Equities, Futures, Options and Spreads.
- Handled some critical on-job research projects
  - Enhanced the performance of the messaging system by serializing/ deserializing structured and non-structured data 50-80% faster over the transport layer.
  - Combined two concepts - synchronization and master slave algorithm to develop an innovative solution in resolving concurrency related issues redundant in three applications
  - Redesigned a latency critical application using dependency injection strategy pattern to ensure scalability for future flows.
  - Designed a utility to perform predictive analysis for calculating the transaction cost analysis (TCA) for a trade.
  - Leading a team of 3, I was actively involved in the decision making for the design structure of the application.

*TA (Technological Analyst)*

July 2012 – July 2014

Developed and managed an application to generate critical real-time client reports that graphically represent the volume weighted average price against a static order overlay for a symbol at any given time.

## EDUCATION

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PhD in Computer Science ( <b>Expected - 2023</b> )	University of Houston, USA	G.P.A – 3.125
Master of Computer Application ( <b>2012</b> )	Veermata Jijabai Technological Institute, India	C.G.P.A - 7.9
Bachelor of Information Technology ( <b>2009</b> )	University of Mumbai, India	Grade - 73.41%