EDUCATION

M.S IN COMPUTER SCIENCE

Graduating - May, 2017. Rochester Institute of Technology Rochester, NY

B.E IN COMPUTER SCIENCE

Anna University Chennai, India

PROFILE

Github:// laksravi LinkedIn:// lakshmi-ravi

COURSEWORK

GRADUATE

Big Data Intelligent Systems Pattern Recognition Statistical Theory Data Mining Graph databases

Independent Study

Advanced Algorithms Handwritten Formula Recognition

UNDERGRADUATE

Operating Systems
Object Oriented Design
Compilers
Data structures and Algorithms

SKILLS

- Java Python Pattern Recognition
- Machine Learning AWS-Simple Work Flow Likelihood Neo-4j
- Graph Mining

•C++ • R • JSP • Shell • Neural Networks • MySQL • Oracle • Spring • Mongodb

- Android Distributed Systems
- Hypothesis Testing Wikitude

EXPERIENCE

AMAZON SOFTWARE DEVELOPMENT ENGINEER, TEST

May 2014 – June 2015

& Kindle Devices

Chennai, India

- Designed & developed, tools to calibrate system parameters, fluidity & multi-tasking capabilities of **kindle devices** under dynamic scenarios.
- Responsibilities: A/B result analysis, Monthly On-call for performance tests.

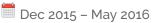
AMAZON SOFTWARE DEVELOPMENT ENGINEER INTERN

- June 2016 Aug 2016
- # Fulfillment by Amazon



- Designed & developed workflow based service execution(using AWS-SWF).
- Scaled the system from Single host to distributed environment
- Implemented & deployed failure handler, which reduced failure rate by 60%.

DISCOVER LAB ANDROID APP DEVELOPER



& Roc-Reader



• Application displays digital content for magazine pages in augmented reality.

RESEARCH

DOCUMENT & PATTERN RECOGNITION LAB RESEARCH MEMBER

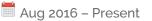


Machine Learning



- Improved handwritten math symbols recognition in formulas, using contextual information from visual density histograms.
- Identify the layout structure of expressions by building a graph representation, visual features for layout classification and extracting final tree using Maximum Spanning Tree Algorithm. (Best Poster award)

NANO COMPUTING LAB RESEARCH ASSISTANT



Neural Networks



- Spatial pooler(SP), an adaptive learning tool, based on brain inspired computing.
- Formulated & implemented, mathematical approach, to formalize SP.

PROJECTS

PATTERN RECOGNITION - HAND WRITTEN FORMULA

Segmentation - Find potential Symbols candidates

• For K-near strokes, predict chances of forming a potential symbol using geometric features, shape context features & find connected components.

Classification - Label Potential symbols with a class name

- Using visual features and orientation based histograms classify symbols.
- Accuracy symbol labels: 90.8% (second best rate in class)

Parsing - Find spatial relations between symbols

• Build expression tree by considering relations with right-most symbol.

GRAPH MINING - PEOPLE TRAVEL PATTERNS

• Identify Peple's travel pattern in Four-square dataset, using frequent sub-graph mining algorithms.

PUBLICATIONS

• A Maximum Likelihood Approach to Adaptive Learning of the Spatial Pooler, at International Joint Conference on Neural Networks, Jan-2017.