

Aruj Mahajan,

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Read Ink Inc, Bangalore, Ind

Feb 2021-Present

OCR Team

- **Character Box:** Designed an algorithm to draw boxes around characters written in cursive (**Python, Matlab, ML**)
- **Recognition Engine:** Developed several rules for recognition engine and found character probabilities using ML algorithms such as SRVF

Apple Inc, Austin, US

Oct 2019 - Jan 2021

Central Workflow Automation and Maintenance Team

- **Webpage development:** Enabled automated assignment of support tickets to employees (**JAVA, SQL, Linux**)
Designed and developed dashboards to track pending tasks and common errors
Built tools to analyze SLA compliance for applications and to isolate problematic areas
- **System upgrades / testing:** Resolved alerts from automated monitoring systems and WW Customer service

Skywalk Team - Predicts delivery dates for Apple Online Store Orders (Python, JAVA, Linux)

- **Day light Savings adjustment:** Improved code to incorporate DST adjustments in delivery time calculation
- **Routing rules engine:** Built new rules in online delivery rule engine based on updated business parameters

Contec Inc, San Jose, US

Jul 2018 – Sep 2019

Hardware Software Design and Integration Team

- **Designed file transfer application:** Collaborated with product architects and technical leaders to conceptualize application architecture using SDLC/CI for development, testing and release (**Python, JavaScript MySQL, Linux**)
Implemented application interface and load-balancer service to efficiently manage file transfers (considering 5 year transfer volume projections)
- **System Re-design for service downtime detection:** Created Graph based data structure to map out all interdependencies between services and developed an algorithm to pinpoint problematic services to streamline the systems i.e., reduced downtime by 200 percent (**Python, MySQL, Linux**)

Universal Modem Tester Product Team

- **Enhancement of test interface website:** Introduced new features for disabled operators e.g., changed fonts on prompts to make them more readable, removed buttons, introduced timers, voice commands and self-restart features (**Python, JavaScript**)
- **Migration from Python 2 to Python 3:** Managed migration of multiple applications and integration

Northwestern University, Evanston, US

Sep 2016 – Aug 2018

Lab work as Research Assistant

- **Development of transition edge sensors:** Created pressure and temperature sensors to test external conditions; developed pressure gauge controller and magnetometer using audrino (**Python, C**)
- **Detection of dark matter:** Designed circuit of squid amplifier to better understand amplified signal
Analyzed results and noise signals to understand sources of noise, using regression analytics
Prepared an interface to increase the speed and efficiency of readings (**KICAD, LabView**)

Master's Thesis – Neutrino Oscillation and MSW effect

- Implemented numeric plotting of piecewise data and improved algorithmic accuracy by ~15%
- Calculated density of moon using simulation runs on large data sets (**Mathematica, MATLAB**)

Education and Skills

- **Education:** Master's and Bachelor's in Physics
Northwestern University (M.Sc, Physics), 2016 – 2017, 3.70 GPA
University of Delhi (B.Sc Physics), 2012 – 2015, 4.00 GPA
- **Skills:** Python, JAVA, Javascript, MySQL, MATLAB, Mathematica, Selenium, TensorFlow, Jira, Linux, Agile