

# Sarthak Khanna

[sarthak.khanna@asu.edu](mailto:sarthak.khanna@asu.edu) • (630)-605-1805 • [Github](#) • [Linkedin](#) • [Website](#) • Tempe, AZ 85281

Computer engineer having strong analytical and communication skills; self-motivated and a team player. Proficient in Python, SQL with experience in Scikit-learn, Pandas and numpy. Eligible to work in the US through post-OPT.

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## EDUCATION

- » **Master of Science in Computer Engineering (Computer Systems)**, Expected May 2018 GPA: 3.54/4.0  
Arizona State University, Tempe, Arizona, USA
- » **Bachelor of Technology in Electronics and Communications Engineering**, May 2016 GPA: 8.75/10  
Vellore Institute of Technology, Vellore, Tamil Nadu, India

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## SKILLS

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| » <b>Tools</b><br>Git • MySQL • phpMyAdmin<br>Linux • Unreal Engine 4<br>Android Studio | » <b>Languages</b><br>Python • HTML/CSS • SQL<br>Matlab • Java • C | » <b>Frameworks/Libraries</b><br>Flask • jQuery • Bootstrap • Jekyll<br>Scikit-Learn • pandas • numpy<br>matplotlib • seaborn • GraphView |
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## RELEVANT COURSEWORK

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|--------------------------------|-----------------------|----------------------------------|
| » Artificial Intelligence      | » Mobile Computing    | » Foundations of Algorithms      |
| » Statistical Machine Learning | » Database Management | » Communication Networks         |
| » Data Mining                  | » Software Security   | » Data Structures and Algorithms |

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## WORK EXPERIENCE

- » **Technical Developer at Stealth Gaming, India (2014 -2016)**
  - Developed the website and implemented a web based cafe management system.
  - Maintained the technical infrastructure on a daily basis.

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## PROJECTS

- » **BraiNet: App Unlock phone using EEG signals**, 2017 (Mobile Computing)
  - Setup linux cloud and fog servers on a Digital Ocean droplet.
  - Implemented a SVM learning algorithm to train and compare the users EEG data in python using scikit-learn .
  - Created an offloading algorithm to determine which server to choose for authentication.
- » **Pacman AI Challenges**, 2017 (Artificial Intelligence)
  - Implemented search algorithms (A star, Uniform Cost Search, DFS, BFS ) and incorporated them in Pacman using python.
  - Programmed Expectimax, Minimax , Alpha Beta pruning, Value Iteration, Q - Learning and policies.
  - Created an AI agent to optimally play Pacman in various scenarios.
- » **Theatre Management system**, 2017 (Database Management)
  - A management system built using Flask on python. Setup up SQL database and performed various tasks like insertion, updates, deletes along with using indexes and triggers in the database.
  - Used flask-mysqldb to connect to the SQL database. Also used the python Faker library to generate dummy data to fill the database.
  - Implemented the web based management system using HTML, CSS and Bootstrap.
- » **Ubuntu Daily Wallpaper changer**, 2017
  - A python script that sets the background of the desktop as the Bing picture of the day, updated everyday.
  - Uses python urllib and os functionalities to download and save the images. Tried on Ubuntu 16.04.
- » **Airbnb New User Bookings Prediction**, 2016 (Statistical Machine Learning)
  - Processed raw data, making it usable for further analysis using the python pandas library.
  - Performed feature engineering and statistical analysis of the data obtaining relevant insights using scikit-learn
  - Implemented traditional classifiers (KNN, SVM, Logistic Regression) and observed their accuracy.
  - Created a blended ensemble and analyzed it's performance versus traditional classifiers.
- » **Stuttered Speech Recognition**, 2016
  - Modified an existing algorithm to facilitate speech recognition for people suffering from stuttering
  - Performed audio processing and stutter removal in Matlab.
  - Designed a neural network to learn from training samples to remove stutter from new test inputs in python, this new audio was then passed to the Google speech API to be recognized without the stutter.
- » **Digit recognition using Matlab**, 2015
  - Created a backward propagation neural network to recognize hand written digits using Matlab.