Arsalan Bashir

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Education

- **National Institute of Technology** — Hazratbal, India
  Bachelor of Engineering in Mechanical Engineering; GPA: 6.989 — *Mar. 2013 – Aug. 2017*

Experience

- **Smart Spin Ltd.** — London, United Kingdom
  Software Engineer — *Aug 2017 - Jan 2018*
  - **About Smart Spin**: Smart Spin is a discovery learning tool for homeschoolers. Learners spin a wheel and Smart Spin loads a random topic from its libary of +900 topics in 8 subjects and 40 category collections.
  - **Technologies used**: Built a RESTful API using Flask (Python), and a front-end service to consume the API using ReactJS. Built the iOS and Android apps from scratch using React Native. Used Firebase Cloud Storage and Realtime Database for persistence. Deployed on AWS EC2 using Nginx, Gunicorn and Supervisor, and scaled to 14,000 daily active users.
  - **Admin panel**: Built an admin console that allowed users to create topics and upload media. Used CoffeeScript to build a serverless standalone application that interacted directly with Firebase Realtime Database.
- **Pilot Labs, Inc.** — Dubai, United Arab Emirates
  Co-founder and Software Engineer — *Oct 2012 - Apr 2014*
  - **About Pilot Labs**: Pilot course builder allowed teachers to collect analytics on learning patterns of their students and would send course recommendations to fill in knowledge gaps. Pilot was selected for the finalists round at the Thiel Fellowship in 2014.
  - **Technologies used**: Built the Minimum Viable Product from scratch using a stack consisting of Flask (Python), AngularJS, and SQLite. The deployment used the WSGI server mod on an Apache HTTP server.
  - **Recommendation system**: Designed a recommendation system using logistic regression to match students with courses on the Pilot platform.
- **National Institute of Technology** — Hazratbal, India
  Undergraduate Research Project — *Mar 2016 - Mar 2017*
  - **Design and manufacturing**: The objective of the project was to build an autonomous chess playing robot. Fabricated a robotic arm capable of playing chess with a human opponent using acrylic sheets and custom 3D printed components designed in SolidWorks.
  - **Image processing and visual-servoing**: Built a visual-servoing algorithm that used stereoscopic 3D modeling to estimate the current state of the chess board, feed the state to a chess engine and run servo actuations via serial output from Raspberry Pi to daisy-chained servos.

Projects

- **AfterClass**: Tool for recursive document annotation and automatically updating documents. Built using ReactJS (Javascript), Django (Python), and ES6/Sass.
- **Open Source Projects**: Contribute regularly to httpie (command line HTTP client), ProseMirror (rich semantic content editor) and Semantic UI (front-end framework)
- **DictionaryMaker**: A webtool that allowed users to build an indexed glossary of words and their definitions, and export to PDF.
- **FPLBot**: Telegram bot that alerts users 8 hours before the Fantasy Premier League transfer deadline.

Awards and Fellowships

- **Awards**: Higher College of Technology Engineering Challenge (Gold medalist), World Scholars Cup (Two gold medals), EdCIL Scholarship 2013
- **Fellowships**: Kairos Fellowship 2015, Lemmings I/O Batch 4