Sidharth Raja
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Education

- **Delhi Technological University** — New Delhi, India
  B. Tech in Computer Engineering; (First Class with Distinction) — *Aug. 2013 – May. 2017*

Experience

- **Uber** — San Francisco, USA
  Software Engineer II — *July 2017 - Present*
  - **Uber Lite**: Conceptualized and developed the new Uber Lite app (optimized for poor network conditions and low-end smartphones), and helped drive it to a successful launch (10mn+ users, 99.95% issue-free rate). Architected and developed several core flows including pickups, location-search and payments.
  - **Network Optimization**: Created and deployed state management architecture for diff/patch based network calls which reduced the payload of our mobile realtime API endpoints by 90%.
  - **Battery Performance**: Led investigation into app battery usage. Introduced optimizations in sensor activations that improved battery use by 80% and reduced uninstall rate by 10k users /day.
  - **Reliability & Quality**: Saved $10 mn / year by improving fraud detection accuracy in payments.
- **Uber** — San Francisco, USA
  Software Engineering Intern — *June 2016 – Aug 2016*
  - **Driver Growth**: Developed a new analytics collection framework to gain more detailed insights into driver experience, driver cancellations and commuter usage.
- **IIIT Delhi** — New Delhi, India
  Research Intern — *May 2015 – July 2015*
  - **Gait analysis**: Created data pipeline for individual silhouette extraction, dimensionality reduction & clustering from video footage of walking crowds.
  - **Dataset creation**: Recording and organizing different categories of crowds to create test-bed dataset.

Publications & Patents

- **POI based location co-ordination system [patent]**: Enhancements in pickup co-ordination between riders and drivers by intelligently recommending "interesting nearby" pickup points. *[project live in Uber, Uber Lite]*
- **Autonomous Pathfinding in Simulated 3D Environments**: in *International Conference on Robotics and Artificial Intelligence,* Shanghai, China, Dec, 2017

Projects

- **Prime Minister's Office Mobile App**: Winning proposal in a nation-wide contest by the Indian PMO aimed at improving government transparency. Collaborated with Google, National Informatics Centre and the Prime Minister's Office to productionize these ideas.
- **Music-centered speech therapy in autism**: Worked with psychologists at the National Brain Research Center (New Delhi) to create a mobile app that provided a learning framework for children on the autism spectrum. This was then deployed in special-needs schools across the state to assist educators.
- **Currensee**: Mobile app to aid visually impaired users in their daily cash transactions. Camera input fed into a neural network for live offline currency recognition. [winner in "Inclusive STEM" Hackathon]
- **Depth estimation from RGB**: Trained CNN models that determine approximate depth from RGB images. Created pipeline to generate ground truth training data from a game engine environment containing randomized 3D models.
- **HackerHire**: A tech-interviewing platform with web code compilation and collaborative features like live canvas, shared text editing and decentralized video conferencing using WebRTC.
- **DTU Maps**: An intra-college map and search engine built entirely on crowdsourced data. Within a week of launch, the app had been downloaded thousands of times and provided a near exhaustive dataset of campus locations.

Programming Skills

- **Languages**: Java, Python, C++, Bash, SQL **Technologies**: RX, TensorFlow, Spark, React, Kafka