Sam Stewart

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Education

PhD Candidate, Math, University of Minnesota (Minneapolis, MN) 2020
MS, Math, University of Minnesota (Minneapolis, MN) 2017
BS, Math, Lewis & Clark College (Portland, OR) 2011-2015
Budapest Semesters in Mathematics (Budapest, Hungary) 2014

- Studied Hungarian and interacted with local culture via language exchange program

Work Experience

Tractors for Africa (Burkina Faso) 2017

- Acted as language and cultural liaison between US team and local team in a rural town in Burkina Faso
- Wrote weekly reports for US team
- Managed finances of local team and coordinated funding with US team

Contract Developer, Upsight Analytics (Portland, OR) 2013-2015

- Wrote Android advertising framework that served millions of ads per month
- Built an automated UI testing framework
- Mentored junior developers
- Patched mission critical bugs in both iPhone and Android SDKs

iPhone Development Intern, SeatMe (San Francisco, CA) 2011

- Wrote core UI components for main app now used by hundreds of restaurants
- Yelp acquired SeatMe in 2013 for $12.7 million

Research Experience

Graduate Research Assistant (Minneapolis, MN) 2015-2020

- **PhD Project**: Designing fast algorithm for simulating hundreds of agents in a crowd model inspired by fluid dynamics
- **Masters Project**: Implemented numerical method in Matlab to study solutions for a fluid model and published results in top journal

Summer Undergraduate Research Experiences (Portland, OR) 2012-2015

- **Summer 2014**: Coded a custom PDE solver in Python / NumPy for a nonlinear wave equation to find numerical evidence of blowup
- **Summer 2013**: Developed custom library in Mathematica to search through thousands of graphs to help prove a statistical classification condition.
- **Summer 2012**: Wrote statistical compression algorithm for a Computer Go player that significantly reduced memory usage. Built and deployed a parallelized Computer Go player across a cluster of five machines

Skills

- **Programming:** Linux, Git, Python, C/C++, Mathematica, Matlab, R, Julia, Java, Vim, LaTeX
- **Math:** PDEs, convex optimization, numerical PDE
- **Software:** Excel, Word, PowerPoint, Blender3D
- **Languages:** French (professional working proficiency)