880 N Lake Shore Drive #4H
Chicago IL 60611

ALEXANDER S HORN

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EMPLOYMENT

Principle Architect - Interior Analytics **ShopperTrak/Tyco/Johnson Controls** **Spring 2015-Current**

- Refactored mobile analytics platform into a robust horizontally scalable micro-services architecture in AWS. Data processing that took days now takes hours.
- Added Prod/Stage/Dev tiers, feature-branch workflow, and continuous integration.
- Lead our team's architecture and sprints, as well as hardware upgrades and new sensor evaluation.
- Contributed to Predictive Traffic Modelling, POCs for Person Tracking, Retail Dwell Personae.

Programmer / Analyst III
Future Internet Architecture **UCLA REMAP** **Spring 2011 - 2015**

- Research for NSF 'Content Centric' Future Internet Architectures: named-data.net & Xerox Parc's ccnx.org
- Participated in many civic computing projects (remap.ucla.edu) including interactive bus benches, geotagged mobile walking tours, open source computer vision person tracking software (openptrack.org)

Senior Interactive Engineer **Agency.com** **Summer 2008 – Spring 2011**

- Interactive development via ActionScript/HTML5/JS/CSS3 from 2D design comps (for HP, Nike, Apple)
- Published my first 2 iOS Applications (Objective C) (HP)

Computer Systems Consulting **alexnano.net** **1998-Ongoing**

- Proximity-based viewing and Augmented Reality application (iOS/iPad) for an LA Art Gallery (2015)
- Embedded 9 DOF sensor in snowboard to effect music on iPhone for 'Signal snowboards' (2014)
- Interactive artwork (computer vision, 3D graphics) in 4 Children's hospitals across US (2002-2008)
- Designed and Deployed 100 embedded kiosks across US (2005-6), Retail JIT Inventory (Prada, 2001)
- Control system for 11 floor robotic sculpture in UK (2007 – 2016+), 3D Dataviz @ Siggraph 2007

EDUCATION

Chicago, IL **DePaul** **2010-2012, 2016-Ongoing**

- M.A. in Predictive Analytics with Computing Methods Concentration. Spring 2016, est. complete Fall 2017.
- B.A. in Computing: Scalable Information Systems. In-major GPA: 3.76
- Graduate Coursework: Data Mining/Machine Learning (Linear Algebra, Regression, Clustering, Decision Trees, SVM, SVD, LDA, CCA, PCA & Factor Analysis, Recommender Systems)
- Undergraduate Coursework: CS, Algorithms, Network & Application Architecture, Security, UX

TECHNICAL APPROACH

- **IT/UX** Enjoy architecting & rapid prototyping solutions from scratch, turning user interviews into scalable production applications with an eye to administration & monitoring
- **Management:** Experienced in Agile/Jira, scoping & resource allocation, building and leading teams,
- **Architecture:** Namespaces, protocols (Thrift/Protobuf), star schema/data warehouse design, micro-services

ADDITIONAL EXPERIENCE AND AWARDS

- **Instructor (2006):** Taught 'Real-time Media' (Multimedia Programming) at Art Institute of Chicago
- **Embedded Computing:** Mobile/IOT dev with various platforms (Raspberry PI, Jetson, Arduino, Android/iOS)

Languages and Technologies

- Python, JavaScript, AWS, Linux, Bash, MongoDB/MySQL/Postgres - primary daily tools
- R, C, C++; node, Java/Android, Objective C/Swift, Windows, Cassandra, Docker – monthly/quarterly tools
- Personal experimentation w/ TensorFlow, CUDA, Hadoop, Spark & real time analytics, service architectures
- 2/3D/Interactive/AR/VR/Dataviz design (Adobe AI/PSD, Maya/Blender3d, Touch, Unity3D, NLE a/v, R, d3/JS)