Hanke Chen

U.S. Permanent Resident

General Info

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Intended Major: Data Science (or Comp. Sci.); Physics; Art

Online Presence

General: www.chenhanke.me Tech: www.kokecacao.me
Portfolio: art.chenhanke.me Github: github.com/kokecacao
Research: www.researchgate.net/profile/Hanke_Chen2

Education

-- Schools --

Sandy Spring Friends School, Sandy Spring, MD;

- 3.92 / 4.00 GPA (Unweighted); 317 service hours
- Completed all science/math AP the school offers

Shenzhen Experimental School (2013-2015)

-- Extra Courses --

Udacity Machine Learning Nanodegree [graduated 2017]
Udacity Deep Learning Nanodegree [graduated 2018]
AI for Robotics at Stanford Pre-Collegiate [completed 2018]
UIUC Data Mining Specialization on Coursera [currently enrolled]

Experience

KokiCraft Network Game Server/Owner, CEO, Programmer (2014 - 2017)

- Founded KokiCraft Network: 1st GTA Minecraft Server in China.
- Programmed & Update new game elements monthly
- Defended against 50+ DDoS attacks / month.
- 344,941 players, $3500+ profit
- $500/month profit when open donation.

Robotics At Maryland (R@M) at UMD/Computer Vision Engineer (2018 - now)

- Develop UMD club's underwater robotics vision algorithm using Deep Learning for AUVSI & ONR's Robosub competition.
- The only Deep Learning student scientist in the club
- Implemented & improved "GradCam" in a 2016 research paper to perform semi-supervised segmentation w/ partially labeled data

SSFS Robotics Team/Captain, Founder (2017 - now)

- Founded Robotics team & recruited ~10% school population
- Fundraised $1230 from school; $3305 from Kuka, Leidos, NAEC companies
- Won FTC Judges Award & Local 1st (first ever Robotics award in school's history)
- Represent school attending US Science & Engineering Festival
- Tutor group members on coding; cultivating new leaders

X-Order Lab/Student Researcher, Data Scientist (2019 - now)

- Member of X-Order Lab (http://xorder.ai/)
- Recrewed as a researcher by Doc. Yuyi Wang (from ETH Zürich)
- Researching on my own ideas in Deep Learning

(for more: visit https://www.chenhanke.me)

My Own Projects

Fixing Stanford Website's Vulnerability (2018)

- Found SQL Injection vulnerability on Stanford University's SPCS website.
- Reported issue and proposed the patch.

Rocket Designing & Launching (2019)

- Successfully design & build a rocket in simulation (KSP), capable of launch from Earth, staging fuel tanks, suicide burn on Moon, safely come back to Earth

Github "Redstone Torch" Software (2018 - now)

- Developed a platform based on Pytorch for Kaggle competition and general Computer Vision challenges.
- Solve interdisciplinary issues in biology, chemistry, geology, medicine, and manufacturing

Book "Tell Me What Rain Knows" (2017)

- A book of personal collection of prose and reflections
- Discussed social issues: law enforcement, controversy in archeology, Chinese anime industry's development obstacle; Socio-Cultural Psychology in traditional "Pocket Money".
- Prose about family, friends, and parting.

Web Development & UI Design (2017 - now)

- Coded 3 personal and 3 business website (for KokiCraft server, Art club, and Robotics club) using HTML and industrial frameworks
- Coded UI design "Brownie" - a minimalistic geek style
- Developing responsive website design to display properly on any device (on laptop, iPad, mobile phone)

Genetic Algorithm for Chemistry 14 Bottle Problem (2018)

- Used Genetic Algorithm to interpret results of 210 experiments
- Program to resolve the composition of the reactance in seconds

Chaos Theory Research (2019)

- Data Analyzed & self-programmed physics engine able to visualize the 3-Body Problem
- Generated and studied bifurcation map for Chaos System
- Introduced Human-Computer Interaction (HCI) able to control each planet in the 3-Body Problem
- Created music track based on bifurcation map

AI-Generated & Aided Arts Portfolio [CV | 2018 - now]

- Please visit my art portfolio: art.chenhanke.me

(for more: visit https://www.kokecacao.me)

Honors & Artificial Intelligence Research

Medical Diagnose: Histopathologic Cancer Detection
[CV | 3 months | 2019]

- Public 1st; Private 113th; Top 10%
- Develop algorithms to identify metastatic cancer w/ pathology scanned images
- Single model achieved 98% AUC accuracy
- Breaking PCam benchmark (arXiv:1806.03962) by 2%

Extracting Cellular Location of Human Proteins Using Deep Learning [CV | 3 months | 2018]

- Proposed a human proteins modeling method by Deep Learning
- Research Paper submitted to Google Science Fair
- "2018 Entrant New Idea Certificate of Recognition"

Medical Diagnose: SIIM-ACR Pneumothorax Segmentation
[CV | 3 months | 2019]

- Global Bronze Medal; Top 7%
- Develop algorithms to diagnose and segment pneumothorax from chest radiographic images.

[Kaggle Achievements] for Data Science Competitions

- Obtained **"DIscussion Expert" Title**
- Global Ranked **320/110,600 (0.289%)** among other datascientists
- **1 Gold + 43 Bronze** Discussion Medal
- **1 Bronze** Competition Medal; **3 Bronze** Kernal Medal;

(for more: visit https://i.chenhanke.me)

Other Skills

Fluent Programing Language: Java, Python, SQL
AI Tools: Linux(Ubuntu), OpenCV, Pytorch, Keras, Tensorflow, Pandas, Numpy
Engineering: Android, Arduino, Raspberry Pi, CAD
Website Language & Framework.: html, css, Ruby, Javascript, Jekyll, Laravel

Language: Chinese (native) | English (fluent, TOEFL 111)
Art: Watercolor, Sketch, Printmaking, Kinematic Chains
Design: Mechanical Design, Game Design, UI Design, Video & Animation Making

(for more: visit https://art.chenhanke.me)