Hanke Chen
U.S. Permanent Resident

General Info
Has U.S. Work Authorization | (301) 605-3574
School Email: hankec@andrew.cmu.edu
Personal Email: i@chenhanke.me

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 & Affiliation --

Carnegie Mellon University, PA; Class of 2024;
- Major: Bachelor of Computer Science and Art
- (Like double major: will recieve two diplomas)
- Current GPA: 3.73

Affiliations: Game Creation Society; DeepVocab Project;

-- Extra Courses --

Udacity Machine Learning Nanodegree [graduated 2017]
Udacity Deep Learning Nanodegree [graduated 2018]
AI for Robotics at Stanford Pre-Collegiate [completed 2018]
UIUC Master in CS (Data Mining Specialization) on Coursera
- Data Visualization [completed w/ GPA 98.7%]
- Text Retrieval and Search Engines [currently enrolled]

Skill Set

Fluent Programing Language: Java, Python, SQL, C, SML, Dart, Javascript, CSS, html,
AI Tools: Linux(Ubuntu), OpenCV, Pytorch, Keras, Tensorflow, Pandas, Numpy
Engineering: Android, Arduino, Raspberry Pi, CAD, Matlab
Website Framework.: Jekyll, Flask, Flutter, GraphQL

Language: Chinese (native) | English (fluent, TOEFL 111)
Art/Design: AI-assisted Art, Generative Art, Game Design
Art Tools: Unity3D, Unreal Engine, GLSL, Blender, Houdini, Zbrush

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

Team Work

Deep Vocab/CTO, Programmer (2020 - 2022)
- A startup company that make IOS&Android app to help English vocabulary memorization using Natural Language Processing AIs
- Developed IOS&Android Frontend with Flutter
- Implemented SQL database on Flask with concurrent locks
- Made network transmission based on GraphQL and RESTful https://github.com/kokecacao/deep_vocab

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 - 2020)
- Developed 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

Empyrean/Technical Artist (2021)
- Programmed shaders for grass, cloud, rock, etc in UnityEngine
- Generated in-game object models and UV in Houdini
- Optimized lightings in game

SSFS Robotics Team/Captain, Founder (2017 - 2020)
- 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

(for more: visit 2-page CV https://cv.chenhanke.me)

Personal Projects

"Winter" - An Indie Game made w/ Unity (2020 - 2021)
- Coded shaders for clouds, winds, ice, snow, etc...
- Coded character controller, game interaction logic
- Design story, snow environment visual, camera movement...

"Redstone Torch" Engine for Computer Vision (2018 - 2020)
- Developed a platform based on Pytorch for Kaggle competition and general Computer Vision challenges.
- Solve interdisciplinary issues in biology, chemistry, geology, medicine, and manufacturing

Many Web Development & UI Projects (2017 - 2020)
- 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)

AI-Generated & Aided Arts Portfolio [CV | 2018 - 2020]
- Please visit my art portfolio: art.chenhanke.me

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

Artificial Intelligence Research & Honors

Medical Diagnose: Histopathologic Cancer Detection
[CV | 3 months | 2019]
- Solo Public 1st; Private 113th; /1157 participants
- Develop algorithms to identify cancer w/ microscopic images
- Single model achieved 98% AUC accuracy
- Breaking PCam state-of-the-art benchmark (arXiv:1806.03962) by 2%

Extracting Cellular Location of Human Proteins Using Deep Learning [CV | 3 months | 2018]
- Paper submitted @ Research Gate: https://doi.org/10.13140/RG.2.2.16431.28326
- Proposed a human proteins modeling method by Deep Learning
- Google Science Fair "2018 Entrant New Idea 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 Honors] for Data Science Competitions
- Obtained "**Discussion Expert**" Title
- Global Ranked **299/111,194(Top 0.3%)** among other datascientists
- **3 Gold + 4 Silver + 43 Bronze** Discussion Medal
- **1 Bronze** Competition Medal; **3 Bronze** Kernal Medal;

(for more: visit my general website https://ai.chenhanke.me)