Hongyu(Alice) Nie

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EDUCATION

Master of Science, *Oregon State University,* Major: Computer Science - Expected December 2022 • 3.55 GPA
Bachelor of Science, *China Agricultural University,* Major: Food Science and Engineering - Completed June 2013

COURSE WORK

Computer Graphics, Computer Animations, Operation System, Parallel programming, Functional Programming.
Numerical linear algebra, Numerical solution of ordinary/partial differential equations.

SKILLS

Programming Language	C, C++, Python, Haskell, OpenGL, OpenMP
Software Knowledge	Git, GitHub, Visual Studio, VS code, LaTeX, Ubuntu, MATLAB, Wireshark, Excel
Communication	Mandarin(native), English(Conversational)

PUBLICATION

Yue Zhang , **Hongyu Nie** , and Eugene Zhang . *Degenerate Curve Bifurcations in 3D Linear Symmetric Tensor Fields.* Springer International Publishing, 2021. Link to the Paper

COMPUTER SCIENCE PROJECTS

3D Windmill implementation with animation **Fall 2019**
- Used OpenGL as developed API rendered a 3D windmill finished in visual studio.
- Animated the object by implementing rotated mesh blades and inside gears which function correctly.

Smallsh Shell implementation **Winter 2021**
- Implemented the Smallsh included a subset of features of Bash shell.
- The finished shell supports prompt, command execution, background and foreground processes in UNIX based system.

Monte Carlo Simulation **Spring 2021**
- Generated a Monte Carlo simulation used OpenMP and CUDA-based methods to determine the range of outcomes for a series of parameters, and calculated the probability for each scenario.

NETFLIX recommendation system **Spring 2021**
- Collaborated with two other team members to improve the user experience NETFLIX recommendation system by designing new features as well as producing prototype with Figma.
- Analyzed multiple usage scenarios, produced corresponding solutions, and presented findings.

WORK EXPERIENCE

Teaching Assistant **March 2020 — Present**
Oregon State University *Corvallis, OR*
- Aided faculties in courses include Parallel Programming(CS475/575), Programming Languages I(CS581), Introduction to Computer Networks(CS372), Introduction to Computer Graphics(CS450/550), Operating System II(CS344/444).
- Conducted students in implementing and debugging coding projects.
- Grading homework, lab reports, and exams.

Research Assistant **September 2019 — March 2020**
Oregon State University, Computer Graphics and Visualization Group *Corvallis, OR*
- Contributed to research paper published to the Springer Link.
- Gave presentations including research progress and paper critiques in reading group.

Recruiter **2017 — 2018**
Bytedance *Beijing, China*
- Sourcing for manager level position openings.

Technical Head Hunter **2013 — 2017**
OfferCome *Beijing, China*
- Lead a recruiting group, Mentored 1 new employee and 2 interns.

VOLUNTEER EXPERIENCE

- Taught fundamental computer animation concepts to high school youth using the MIT 6.837 online curriculum **Summer 2020**
- Served as a caregiver for children in Beijing daxing SOS orphanage. **Summer 2012**