



# Computational Fluid Dynamics (CFD)

Wu Chong

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## Interest positions

- ★ Data Engineer
- ★ Machine Learning Engineer (pytorch, hadoop)
- ★ Spark Engineer
- ★ Bigdata Engineer (hadoop)

## Education Background

- ★ **2018.08-2022.03** Nanyang Technological University Aerospace Engineering Ph.D. candidate  
(passed qualifying examination and achieved candidate but **quit** myself after that)  
GPA:3.58/5
- ★ **2015.09-2018.06** Beihang University Aerospace Engineering M.E.  
Rank of average score:60~90/210 GPA:3.24/4
- ★ **2010.09-2014.06** Nanchang Hangkong University Flight Vehicle Propulsion Engineering B.E.  
Rank of average score: 6/70 GPA:3.324/4

## Internet Experience

- ★ 2022.07-2022.07 Constructed personal blog with Hexo  
(Utilized the Hexo theme template and modified its layout; <https://didadidaboom.github.io/blog> )
- ★ 2022.07-2022.07 Wrapped **Hadoop ecosystem** and its components by **docker**  
(Wrote my own Dockerfile to wrap Hadoop components, which can be used to construct recommender system; Docker found by searching Dockerhub ID: didadidaboom; and docker file found at GitHub <https://github.com/didadidaboom> )
- ★ 2022.03-2022.06 Learnt **neural networks** theory systematically and practiced it by **PyTorch**  
(Lead all the processes from **data collection, cleaning, and pre-processing, to training models**, including deep feedforward networks, RNN, and Gan; Followed a paper and wrote its corresponding algorithm)
- ★ 2022.02-2022.03 Repeated an open project - “Recommend System: 黑马头条”  
(Practiced **Hadoop ecosystem** and their components including **Hadoop, Hive, Yarn, Sqoop, Spark**; Learned how the recommender algorithms developed from item-based and user-based recommendation to model-based recommendation. Lead all the processes from **Flume, HDFS, Spark-SQL, Spark-ML, and Redis, to Recommender.**)
- ★ 2021.12-2022.02 Started a Mini-program project “BKMIST”, which is a social community and was published on the top of previous Mini-program “圈子”  
(The whole project was finished by myself, including concept design, database design, UI design, frontend (Javascript) development, backend (python, Django Rest framework) development, and cloud server deployment; Project found at <https://github.com/didadidaboom/bkmist> and <https://github.com/didadidaboom/bkmist-frontend> )
- ★ 2020.05-2020.12 Organization of the development of a social App “圈子”

(Including concept design, the product requirement written, and recruitment of members)

- ★ 2017.05-2017.10 Organization of the development of the auxiliary software for a trading platform (Including fundraising(in private), product requirement, recruitment of members, and organization of the developers)

## Courses related to internet

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- ★ Special Advanced Topic: Digital Image Processing (including the algorithms of facial recognition and picture synthesis)
- ★ Artificial Intelligence in Game Design (including the algorithms of machine learning, such as supervised learning, unsupervised learning, and reinforcement learning)

## Research Experience

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- ★ **2021.03-2021.10 Incorporated the LBFS and GKFS methods into the OpenFOAM (open source; C++)** *(success but the turbulent is still not verified)*
  - Parallel, 2D and 3D methods.
- ★ **2020.07-2021.03 Development of Fortran packages for the LBFS and GKFS method** *(success)*
  - Both the LBFS and GKFS shared a same mesh package, which compacted files. The whole packages included 7-10 files. Do not support parallel running.
- ★ **2019.07-2020.07 Incorporated the combustion-support Lattice Boltzmann method into the open source, Palabos (C++)** *(failed)*
- ★ **2018.07-2019.07 Incorporated the Flamelet model into the open source, Cantera (C++), and wrapped them in Python package** *(success)*
  - Cantera part can be found in <https://github.com/CHONGN/cantera>.

## Programing Skills & Softwares

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- ★ English level: Overall Band Score 6.5 in IELTS and CET-6
- ★ Computer level: Grade two C programming language, Python(skilled), C++, fortran (skilled)  
Java(understand), Javascript
- ★ Professional skills: OpenFOAM, Palabos, ANSYS, CAD, Unity(familiar)  
Django(skilled), pytorch, Hadoop, spark, sql(skilled)

## social accounts

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- ★ Github: didadidaboom
- ★ Dockerhub: didadidaboom
- ★ Personal blog: <https://didadidaboom.github.io/blog>

## Awards & Practices

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|-----------|--|----------------|
| 2018-2022 | Nanyang Technological University, Research scholarship   |                |
| 2015-2018 | Second-class scholarship of Beihang University (3 times)                                       | School-level   |
| 2010-2011 | Merit student of Nanchang Hangkong University  | School-level   |
| 2010-2014 | First, Second, Third and Second-class scholarship of Nanchang Hangkong University respectively | School-level   |
|           | The 9th Zhou Peiyuan Mechanics Competition for College students                                | Province-level |
| 201106    | Excellent Student Cadre of School of Aircraft Engineering                                      | School-level   |

## Academic Achievements

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[1]. Wu C, Chan W L. Simulation of Scalar Transport in a Non-Reacting Turbulent Jet using the Lattice Boltzmann Method[C]//APS Division of Fluid Dynamics Meeting Abstracts. 2019: P41. 004.