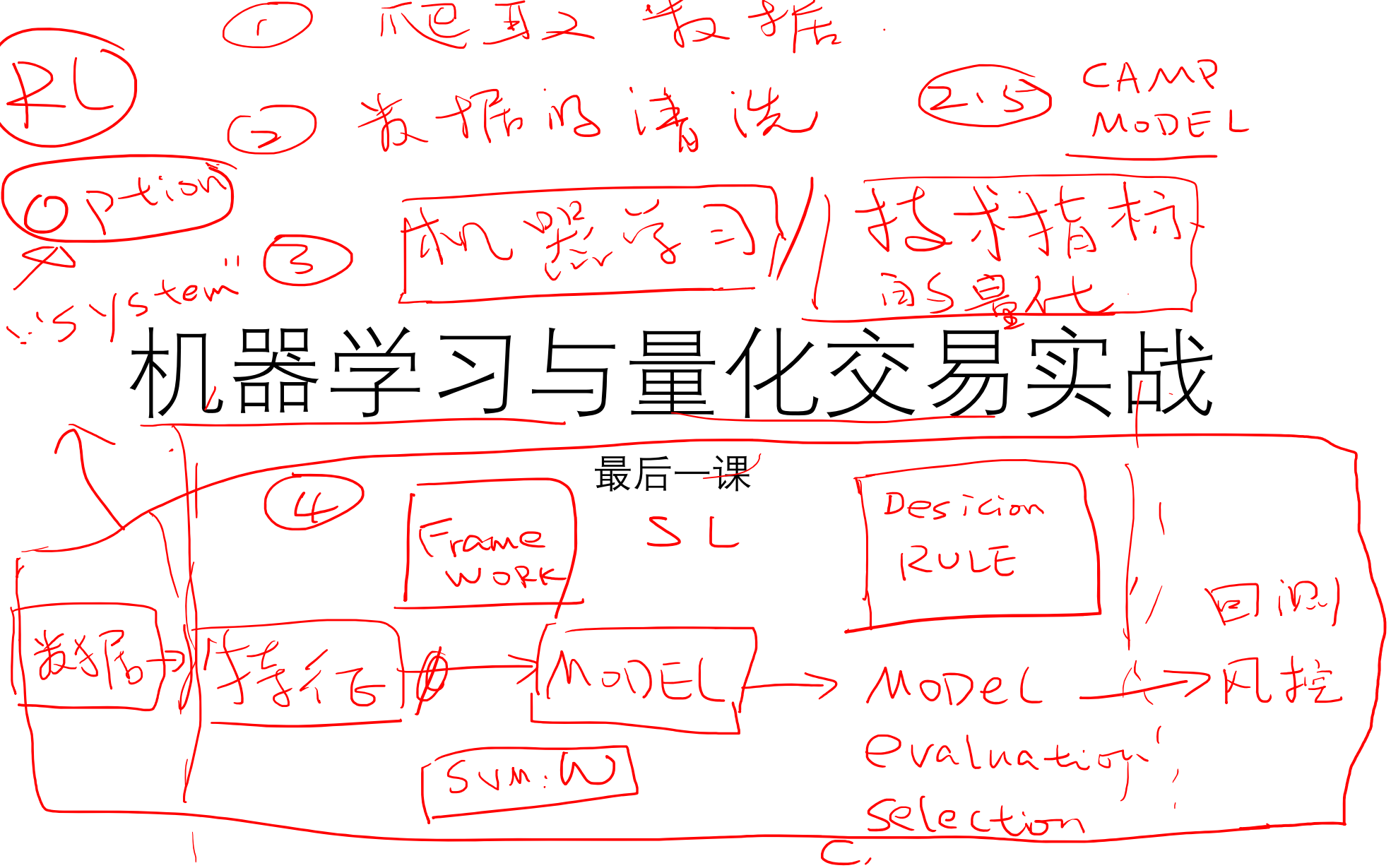
机器学习与量化交易实战

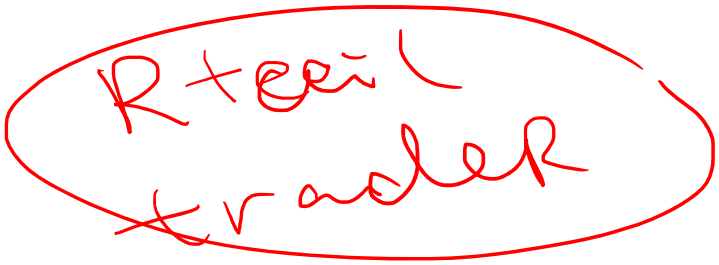


20130506050541242

TABLE I. OTHER FEATURES

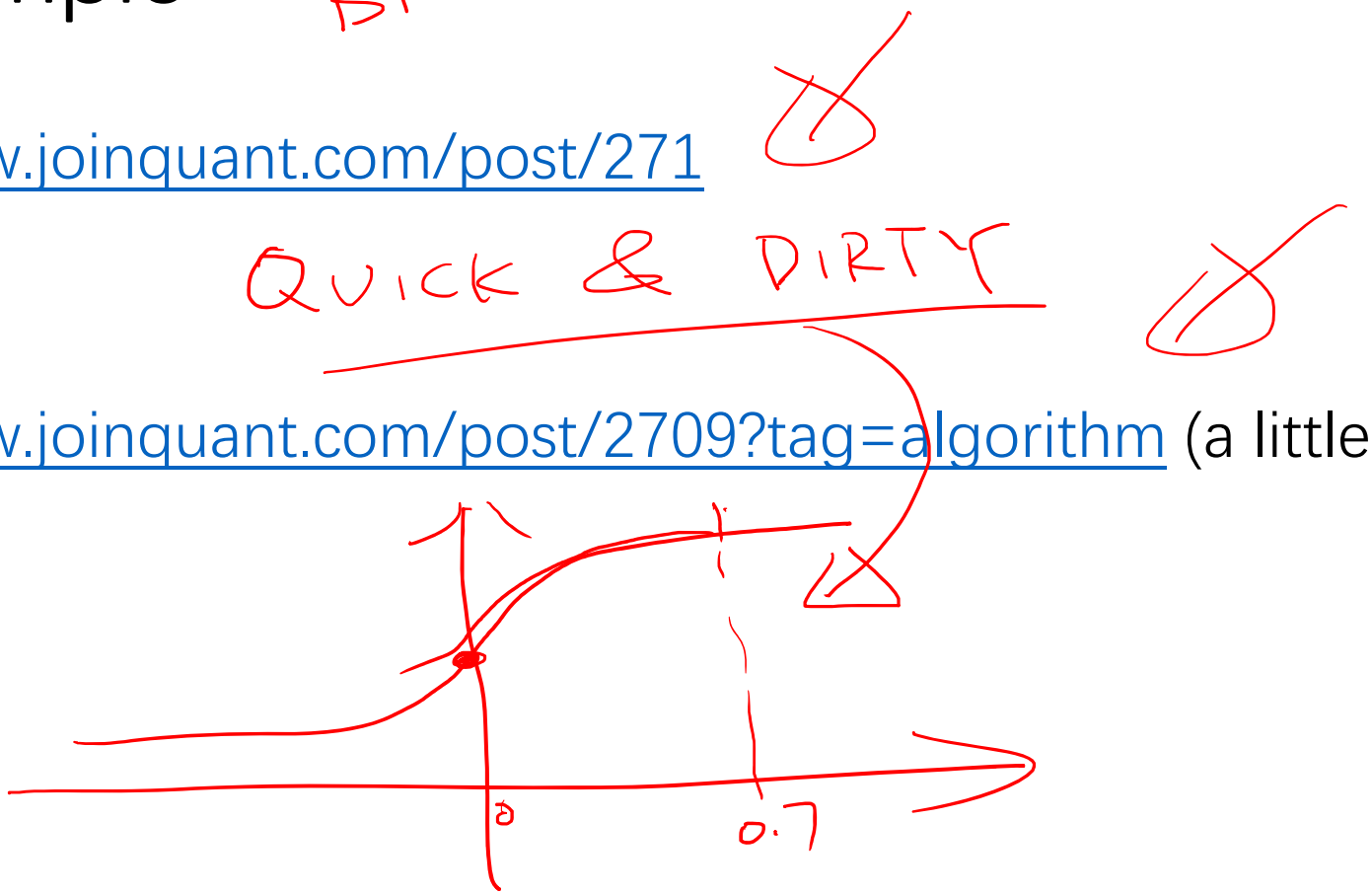
Feature name	Formula
Momentum	$(C(i)/C(i-N)*100$
Williams %R	$(HH(n)-C(t))/HH(n)-LL(n))*100$
Rate of change (ROC)	$(C(t)-C(t-n))/C(t-n)$
5 Day disparity	$(C(t)/MA(5))*100$
10 Day disparity	$(C(t)/MA(10))*100$
Stochastic %K	$(C(t)-C(t-1))/C(t-1)*V$
Price volume trend (PVT)	$Fitness=(P(i)-PR)/(\sum(P(i)-PR))$

http://jspauld.com/post/35126549635/how-i-made-500k-with-machine-learning-and-hft



Bad Example

- https://www.joinquant.com/post/271
- https://www.joinquant.com/post/2709?tag=algorithm (a little bit better)



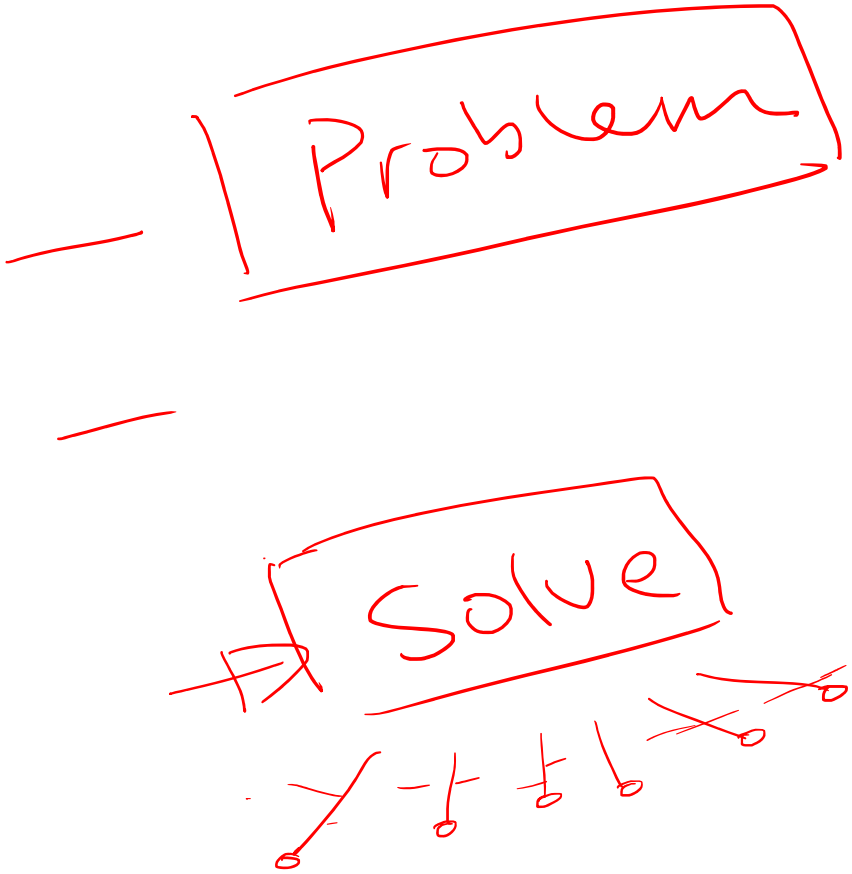
Great Example

- https://github.com/ezhulenev/orderbook-dynamics
- multi-svm.pdf

Basic Set	Description(i = *level index*, $n = 10$)
$v_1 = \{P_i^{ask},\ V_i^{ask},\ P_i^{bid},\ V_i^{bid}\}_{i=1}^{n},$	*price and volume (n levels)*

Time-insensitive Set	Description(i = *level index*)
$v_2 = \{(P_i^{ask} - P_i^{bid}), (P_i^{ask} + P_i^{bid})/2\}_{i=1}^{n},$	*bid-ask spreads and mid-prices*
$v_3 = \{P_n^{ask} - P_1^{ask}, P_1^{bid} - P_n^{bid}, \lvert P_{i+1}^{ask} - P_i^{ask}\rvert, \lvert P_{i+1}^{bid} - P_i^{bid}\rvert\}_{i=1}^{n},$	*price differences*
$v_4 = \{\frac{1}{n}\sum_{i=1}^{n} P_i^{ask},\ \frac{1}{n}\sum_{i=1}^{n} P_i^{bid},\ \frac{1}{n}\sum_{i=1}^{n} V_i^{ask},\ \frac{1}{n}\sum_{i=1}^{n} V_i^{bid}\},$	*mean prices and volumes*
$v_5 = \{\sum_{i=1}^{n}(P_i^{ask} - P_i^{bid}),\ \sum_{i=1}^{n}(V_i^{ask} - V_i^{bid})\},$	*accumulated differences*

Time-sensitive Set	Description(i = *level index*)
$v_6 = \{dP_i^{ask}/dt,\ dP_i^{bid}/dt,\ dV_i^{ask}/dt,\ dV_i^{bid}/dt\}_{i=1}^{n},$	*price and volume derivatives*
$v_7 = \{\lambda_{\Delta t}^{la},\ \lambda_{\Delta t}^{lb},\ \lambda_{\Delta t}^{ma},\ \lambda_{\Delta t}^{mb},\ \lambda_{\Delta t}^{ca},\ \lambda_{\Delta t}^{cb}\ \}$	*average intensity of each type*
$v_8 = \{\mathbf{1}_{\{\lambda_{\Delta t}^{la} > \lambda_{\Delta T}^{la}\}},\ \mathbf{1}_{\{\lambda_{\Delta t}^{lb} > \lambda_{\Delta T}^{lb}\}},\ \mathbf{1}_{\{\lambda_{\Delta t}^{ma} > \lambda_{\Delta T}^{ma}\}},\ \mathbf{1}_{\{\lambda_{\Delta t}^{mb} > \lambda_{\Delta T}^{mb}\}}\},$	*relative intensity indicators*
$v_9 = \{d\lambda^{ma}/dt,\ d\lambda^{lb}/dt,\ d\lambda^{mb}/dt,\ d\lambda^{la}/dt\},$	*accelerations(market/limit)*


Problem
Solve

http://oyc.yale.edu/economics

PPT

Reading List.

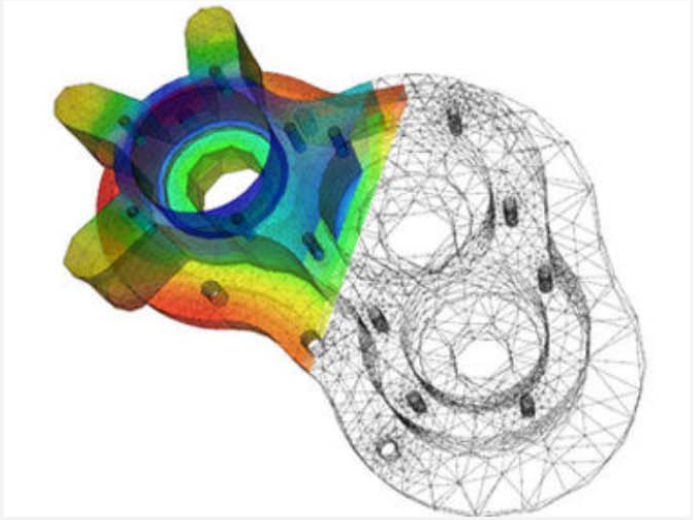
- http://v.163.com/special/financialmarkets/

https://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-041-probabilistic-systems-analysis-and-applied-probability-fall-2010/

http://open.163.com/special/opencourse/multivariable.html

请当复制手指！

http://open.163.com/special/opencourse/equations.html



麻省理工学院公开课：微分方程

本课程共33集(缺18集) 翻译完 欢迎学习

课程介绍

微分方程是一门表述自然法则的语言。理解微分方程解的性质，是许多当代科学和工程的基础。常微分方程是关于单变量的函数，一般可以认为是时域变量。

分享 ☆收藏

立即播放

THINK IN XX

LISP

麻省理工学院公开课：计算机科学及编程导论

6.001

本课程共24集 翻译完 欢迎学习

课程介绍

这门课程适用于那些拥有很少或没有编程经验的学生,它致力于使学生理解计算机在解决问题中的作用,并且帮助学生，不论其专业，使他们对于能够完成有用的小程序的目标充满信心。

分享 ▾ ☆收藏

立即播放

PYTHON

http://open.163.com/special/opencourse/cs50.html

斯坦福大学公开课：编程范式

本课程共27集 翻译完 欢迎学习

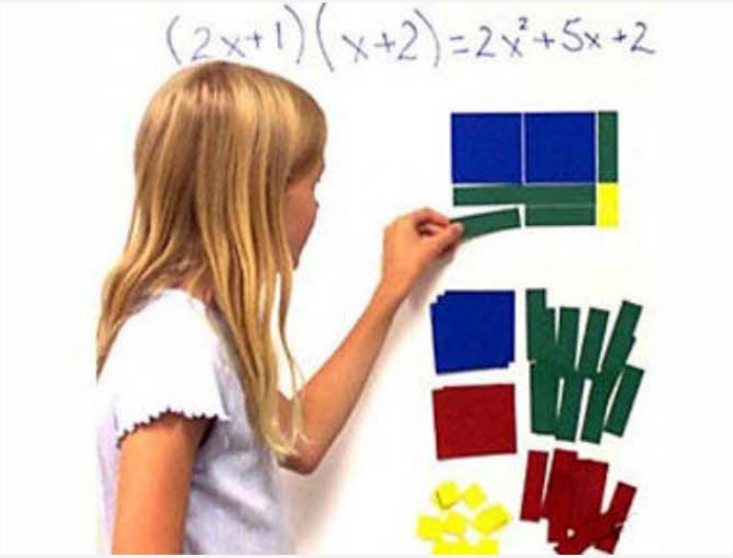
课程介绍

该课程主讲C和C++高级内存管理特色；命令式和面向对象2种范式的差异。函数范式（LISP）和并行编程（C和C++） Python C#等新语言概论。基础要求:具备编程能力，能在抽象化层次上解决问题。学术应该有一定的C++基础。熟悉矩阵、指针、引用、类、算法、递归、链表、HASH算法、迭代等。

分享 ▾ ☆ 收藏

立即播放

一定要看



麻省理工公开课：线性代数

本课程共35集 翻译完 欢迎学习

课程介绍

“线性代数”，同微积分一样，是高等数学中两大入门课程之一，不仅是一门非常好的数学课程，也是一门非常好的工具学科，在很多领域都有广泛的用途。本课程讲述了矩阵理论及线性代数的基本知识，侧重于那些与其他学科相关的内容，包括方程组、向量空间、行列式、特征值、相似矩阵及正定矩阵。

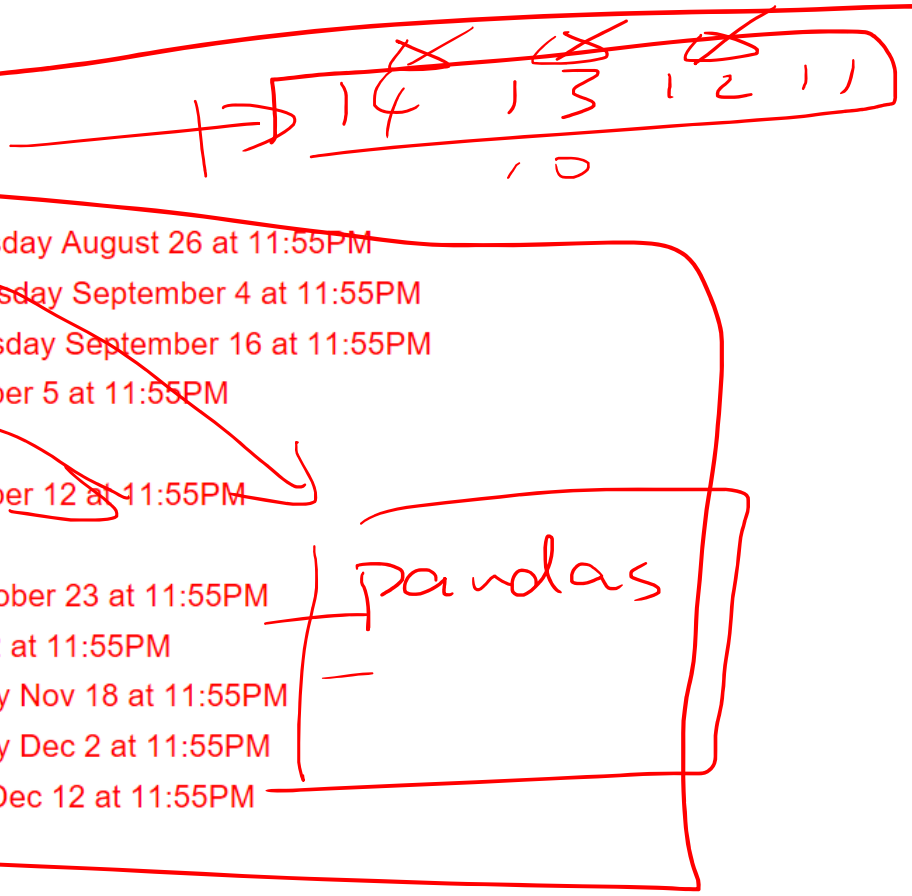
分享 ▾ ☆ 收藏

立即播放

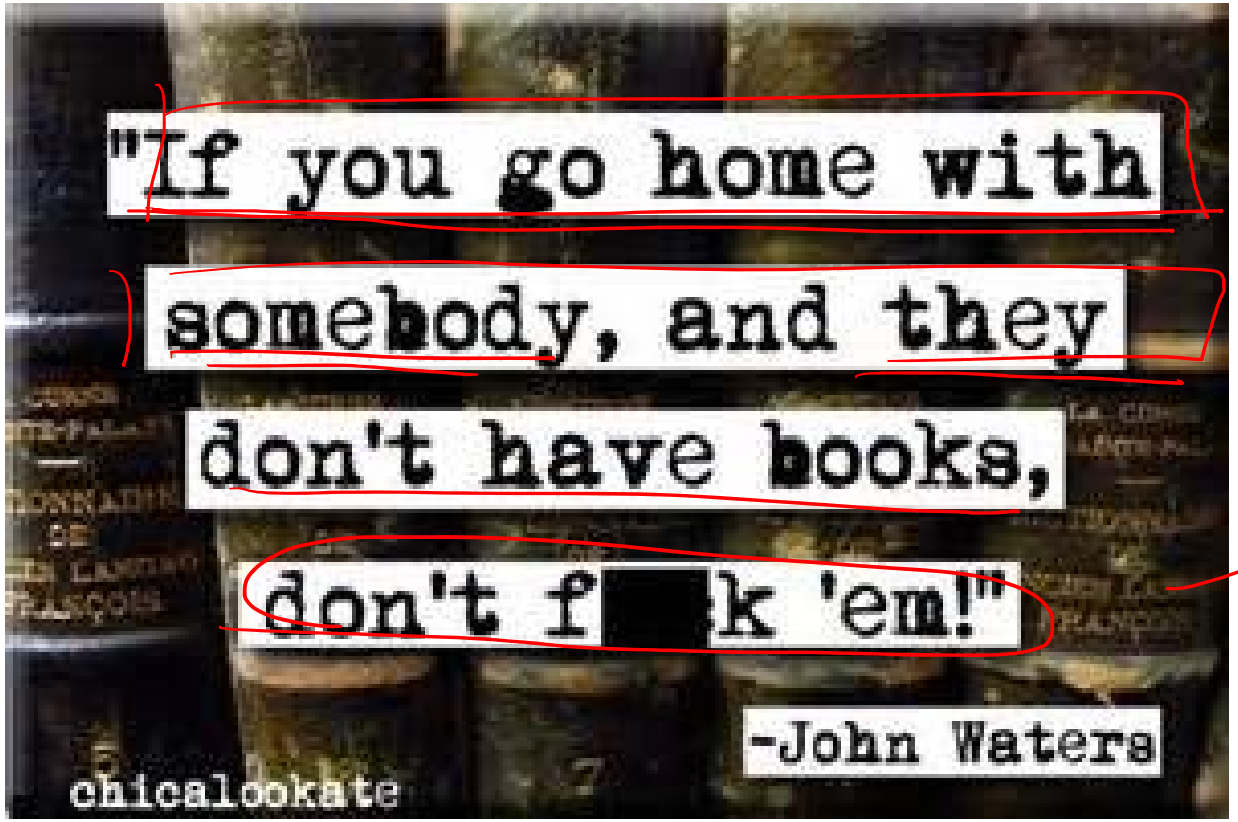
http://wiki.quantsoftware.org/index.php?title=ML4Trading

New:

- Please sign up with piazza for this course: piazza
- Project 1A description 2014Fall7646_Project_1A due Tuesday August 26 at 11:55PM
- Project 1B description 2014Fall7646_Project_1B due Thursday September 4 at 11:55PM
- Project 1C description 2014Fall7646_Project_1C due Tuesday September 16 at 11:55PM
- fin_project1 CompInvestI_Homework_1 due Sunday October 5 at 11:55PM
- Mid-term study guide 2014MidTermGuide
- fin_project2 CompInvestI_Homework_2 due Sunday October 12 at 11:55PM
- all fin_projs here: Computational_Investing_I
- fin_project3 CompInvesti_Homework_3 due Thursday October 23 at 11:55PM
- fin_project4 CompInvesti_Homework_4 due Sunday Nov 2 at 11:55PM
- Project 2 description 2014Fall7646_Project_2 due Tuesday Nov 18 at 11:55PM
- Project 3 description 2014Fall7646_Project_3 due Tuesday Dec 2 at 11:55PM
- Project 4 description 2014Fall7646_Project_4 due Friday Dec 12 at 11:55PM



And some books..


"If you go home with
somebody, and they
don't have books,
don't f k 'em!"
-John Waters
chicalookate


IF YOU GO HOME
WITH SOMEBODY
AND THEY DON'T
LIKE BOOKS
DON'T F*CK THEM

Books

- 高性能python
- 机器学习实战 /机器学习系统设计
- 期货市场技术分析 / 主动投资组合管理 / 可视化量化金融
- Python金融大数据分析
- 代码之髓 / Effective Python / 编程珠玑
- Python编程快速上手—让繁琐工程自动化
- Learn Python the hard way

And some more books…

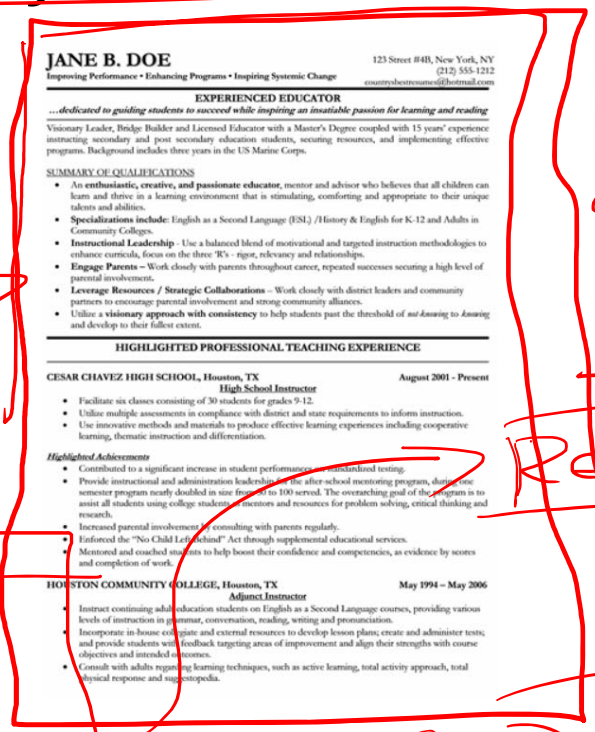
- Introduction to statistical learning
- 图解机器学习

- (warning: Elements of statistical learning)

How to prepare your resume

- The master resume

- Github!



JANE B. DOE

Improving Performance • Enhancing Programs • Inspiring Systemic Change

123 Street #4B, New York, NY
(212) 555-1212
countrysbestresumes@hotmail.com

EXPERIENCED EDUCATOR

…dedicated to guiding students to succeed while inspiring an insatiable passion for learning and reading

Visionary Leader, Bridge Builder and Licensed Educator with a Master's Degree coupled with 15 years' experience instructing secondary and post secondary education students, securing resources, and implementing effective programs. Background includes three years in the US Marine Corps.

SUMMARY OF QUALIFICATIONS

- An **enthusiastic, creative, and passionate educator**, mentor and advisor who believes that all children can learn and thrive in a learning environment that is stimulating, comforting and appropriate to their unique talents and abilities.
- **Specializations include**: English as a Second Language (ESL) /History & English for K-12 and Adults in Community Colleges.
- **Instructional Leadership** – Use a balanced blend of motivational and targeted instruction methodologies to enhance curricula, focus on the three 'R's - rigor, relevancy and relationships.
- **Engage Parents –** Work closely with parents throughout career, repeated successes securing a high level of parental involvement.
- **Leverage Resources / Strategic Collaborations** – Work closely with district leaders and community partners to encourage parental involvement and strong community alliances.
- Utilize a **visionary approach with consistency** to help students past the threshold of *not knowing* to *knowing* and develop to their fullest extent.

HIGHLIGHTED PROFESSIONAL TEACHING EXPERIENCE

CESAR CHAVEZ HIGH SCHOOL, Houston, TX — **August 2001 - Present**
High School Instructor

- Facilitate six classes consisting of 30 students for grades 9-12.
- Utilize multiple assessments in compliance with district and state requirements to inform instruction.
- Use innovative methods and materials to produce effective learning experiences including cooperative learning, thematic instruction and differentiation.

Highlighted Achievements

- Contributed to a significant increase in student performances on standardized testing.
- Provide instructional and administration leadership for the after-school mentoring program, during one semester program nearly doubled in size from 50 to 100 served. The overarching goal of the program is to assist all students using college students as mentors and resources for problem solving, critical thinking and research.
- Increased parental involvement by consulting with parents regularly.
- Enforced the "No Child Left Behind" Act through supplemental educational services.
- Mentored and coached students to help boost their confidence and competencies, as evidence by scores and completion of work.

HOUSTON COMMUNITY COLLEGE, Houston, TX — **May 1994 – May 2006**
Adjunct Instructor

- Instruct continuing adult education students on English as a Second Language courses, providing various levels of instruction in grammar, conversation, reading, writing and pronunciation.
- Incorporate in-house curriculum and external resources to develop lesson plans; create and administer tests; and provide students with feedback targeting areas of improvement and align their strengths with course objectives and intended outcomes.
- Consult with adults regarding learning techniques, such as active learning, total activity approach, total physical response and suggestopedia.

Andrej

Follow

Block or report user

Stanford

Joined on Apr 11, 2010

Overview Repositories 29 Stars 70 Followers 6.8k Following 5

Popular repositories

char-rnn
Multi-layer Recurrent Neural Networks (LSTM, GRU, RNN) for character-level language models in Torch
Lua ★4.2k ⑂1.1k

neuraltalk
NeuralTalk is a Python+numpy project for learning Multimodal Recurrent Neural Networks that describe images with sentences.
Python ★3.8k ⑂908

neuraltalk2
Efficient Image Captioning code in Torch, runs on GPU
Jupyter Notebook ★2.8k ⑂530

arxiv-sanity-preserver
Web interface for browsing, search and filtering recent arxiv submissions
Python ★3.1k ⑂777

recurrentjs
Deep Learning in Javascript. Train Convolutional Neural Networks (or ordinary ones) in your browser.
JavaScript ★5.8k ⑂1.1k

recurrentjs
Deep Learning in Javascript. Train Convolutional Neural Networks (or ordinary ones) in your browser.
HTML ★484 ⑂107

320 contributions in the last year

November 2016

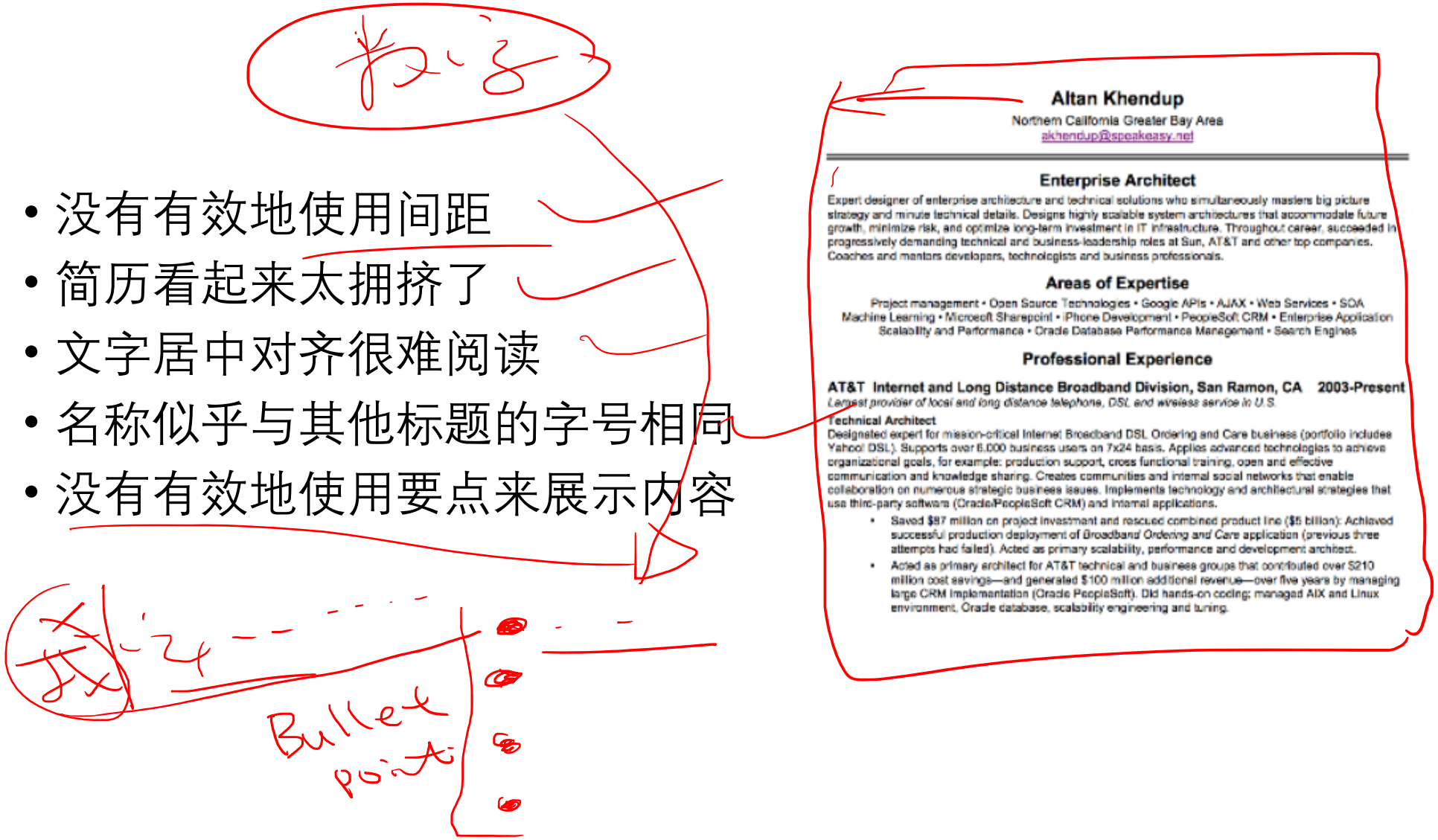
Created 22 commits in 2 repositories
openai/pixel-cnn 20 commits

Jump to ▾ 2016 2015 2014 2013

Resume

Rememe

- 没有有效地使用间距
- 简历看起来太拥挤了
- 文字居中对齐很难阅读
- 名称似乎与其他标题的字号相同
- 没有有效地使用要点来展示内容



Altan Khendup

Northern California Greater Bay Area

akhendup@speakeasy.net

Enterprise Architect

Expert designer of enterprise architecture and technical solutions who simultaneously masters big picture strategy and minute technical details. Designs highly scalable system architectures that accommodate future growth, minimize risk, and optimize long-term investment in IT infrastructure. Throughout career, succeeded in progressively demanding technical and business-leadership roles at Sun, AT&T and other top companies. Coaches and mentors developers, technologists and business professionals.

Areas of Expertise

Project management • Open Source Technologies • Google APIs • AJAX • Web Services • SOA
Machine Learning • Microsoft Sharepoint • iPhone Development • PeopleSoft CRM • Enterprise Application Scalability and Performance • Oracle Database Performance Management • Search Engines

Professional Experience

AT&T Internet and Long Distance Broadband Division, San Ramon, CA 2003-Present

Largest provider of local and long distance telephone, DSL and wireless service in U.S.

Technical Architect

Designated expert for mission-critical Internet Broadband DSL Ordering and Care business (portfolio includes Yahoo! DSL). Supports over 6,000 business users on 7x24 basis. Applies advanced technologies to achieve organizational goals, for example: production support, cross functional training, open and effective communication and knowledge sharing. Creates communities and internal social networks that enable collaboration on numerous strategic business issues. Implements technology and architectural strategies that use third-party software (Oracle/PeopleSoft CRM) and internal applications.

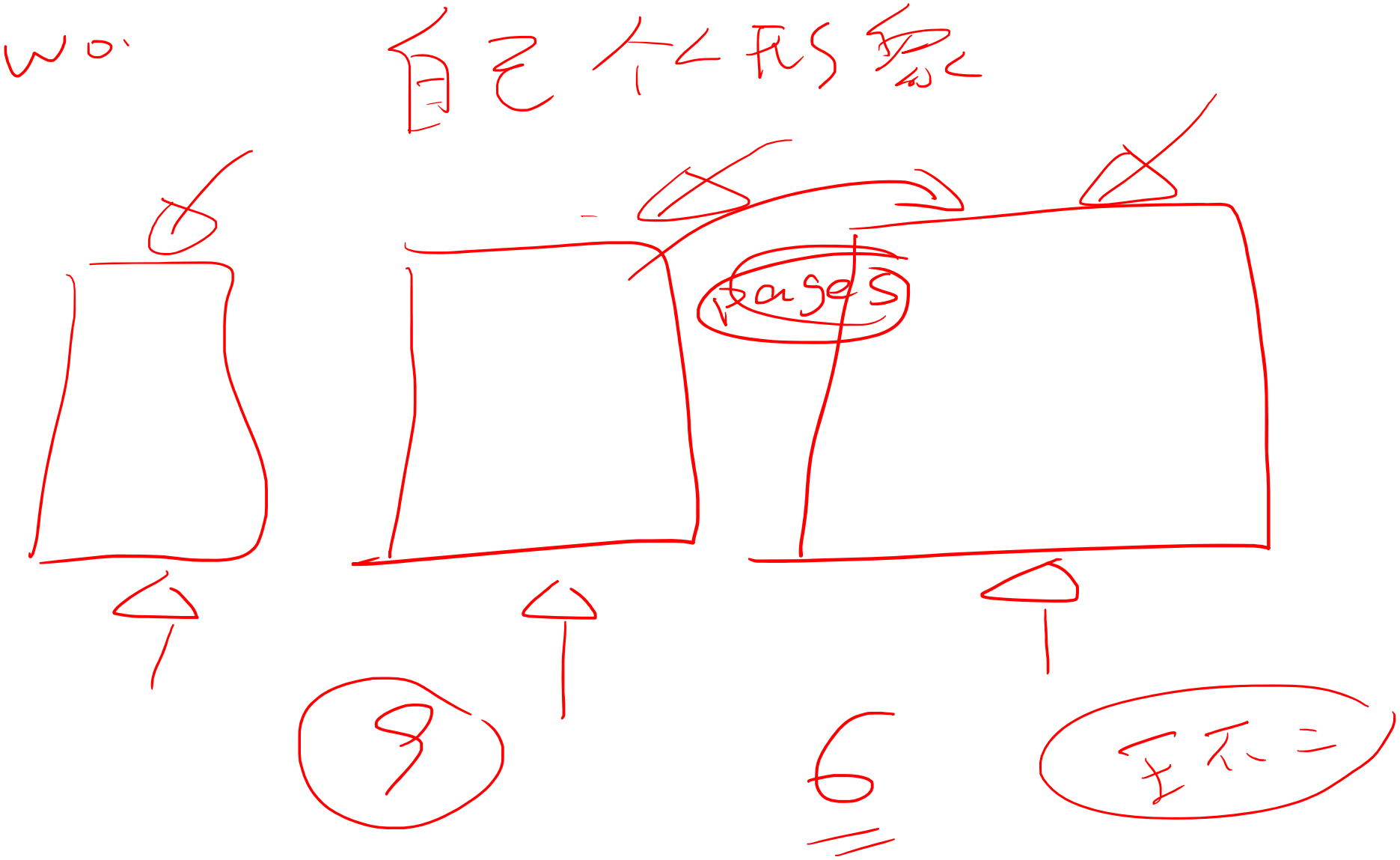
- Saved $87 million on project investment and rescued combined product line ($5 billion): Achieved successful production deployment of *Broadband Ordering and Care* application (previous three attempts had failed). Acted as primary scalability, performance and development architect.
- Acted as primary architect for AT&T technical and business groups that contributed over $210 million cost savings—and generated $100 million additional revenue—over five years by managing large CRM implementation (Oracle PeopleSoft). Did hands-on coding; managed AIX and Linux environment, Oracle database, scalability engineering and tuning.

项目

- 包含你完成的项目名称的标题。
- 项目的有效超链接。
- 项目的要点描述。
- 写下你使用的技术和任何技能。
- 说明应简明扼要。

How to prep for your (non-tech)interview

- 选择说明以下关系的三种工作情况：
  - 领导/团队
  - 主动/动机
  - 问题解决、计划和组织
  - 一次困难/失败
- 您的叙述应该：
  - 有开头、中间和结尾
  - 按照 STAR 方法 situation task action results
  - 说实话
  - 详细说（提供详细信息）


pages
9
6

祝同学们前程似锦

感谢大家的一路坚持!